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Industry Should Reduce Excess Gasoline Stocks and Stop Illegal Production in East Texas

By ANDREW M. ROWLEY

TWO matters of the utmost importance to the entire petroleum industry should be settled at once. With these problems out of the way the oil business will be by far in the best condition it has enjoyed in years and will be in position to operate profitably and benefit from its accomplishments in stabilizing crude oil production.

The first matter is the piling up of gasoline stocks during the season of the year when heavy withdrawals should be made from storage. A number of refiners are responsible for this condition which threatens not only the gasoline price structure but is a powerful influence tending to weaken the crude oil market. If these refiners refuse to realize this situation and take quick action to correct it, the entire industry would be benefited by publication of the names of these refining companies and figures showing their accumulations of gasoline.

The second matter of importance is the problem of illegal production of crude oil in East Texas. There does not seem to be the shadow of a doubt large quantities of crude oil are being produced, sold and transported daily from the East Texas Field in excess of allowables. Some of this illegally produced crude, it is reliably reported, is being made into gasoline in the area and this gasoline bootlegged under regularly posted prices.

Authorities of the State of Texas should take immediate action in this matter and the legitimate oil companies operating in East Texas should co-operate to the fullest extent to stamp out this evil. Every producer of crude oil in the State of Texas and elsewhere in the United States, who is curtailing his output and living up to the regulations regarding production is vitally affected by this illegal practice in East Texas for this crude oil, produced in excess of allowables, is being sold under regularly posted prices and is taking markets away from producers who are abiding by regulations.

Oil companies are beginning to report profits on their operations. The change to black, coming after so long a period of using only red ink in ledgers, should not lull the companies into a false sense of security. Excessive stocks of gasoline and stealing large quantities of crude oil in East Texas are vitally important factors which might change the present situation. They should be combated just the same as gasoline tax evasion.

Crude Oil Production in the United States

Estimated daily average production for the week ending July 23, and a comparison with previous week and one year ago, follows:

	July 23	July 16	July 25, 1931
Oklahoma—			
Oklahoma City	126,115	83,210	111,595
Seminole-St. Louis	117,720	112,735	146,015
Remainder of State	210,085	210,390	224,035
Total Oklahoma	453,920	406,335	481,645
East Texas—			
Lathrop	129,896	127,596	111,219
Kilgore	104,515	103,305	212,012
Joiner	111,087	106,487	181,715
Total East Texas	345,498	337,388	504,946
West Texas	177,512	178,312	206,002
North Central Texas	74,137	76,156	78,881
Texas Panhandle	53,862	52,895	55,742
East Central Texas	57,536	57,364	42,350
Gulf Coast Texas	112,295	113,805	121,921
Southwest Texas	60,578	61,349	63,496
Total State of Texas	881,418	877,269	1,073,338
Kansas	96,380	97,120	97,220
North Louisiana	29,915	30,330	33,440
Gulf Coast Louisiana	32,461	32,632	27,810
Arkansas	34,155	34,115	40,585
Eastern fields	118,000	118,000	107,000
Rocky Mountain area	81,510	79,930	95,973
California—			
Santa Fe Springs	58,750	58,000	62,500
Long Beach	69,000	70,000	73,750
Playa Del Rey	14,500	14,500	24,000
Elwood	14,250	14,250	26,500
Kettleman Hills	62,000	62,250	74,000
Remainder of State	251,500	252,000	259,500
Total California	470,000	471,000	520,250
Total United States	2,197,759	2,146,731	2,477,261

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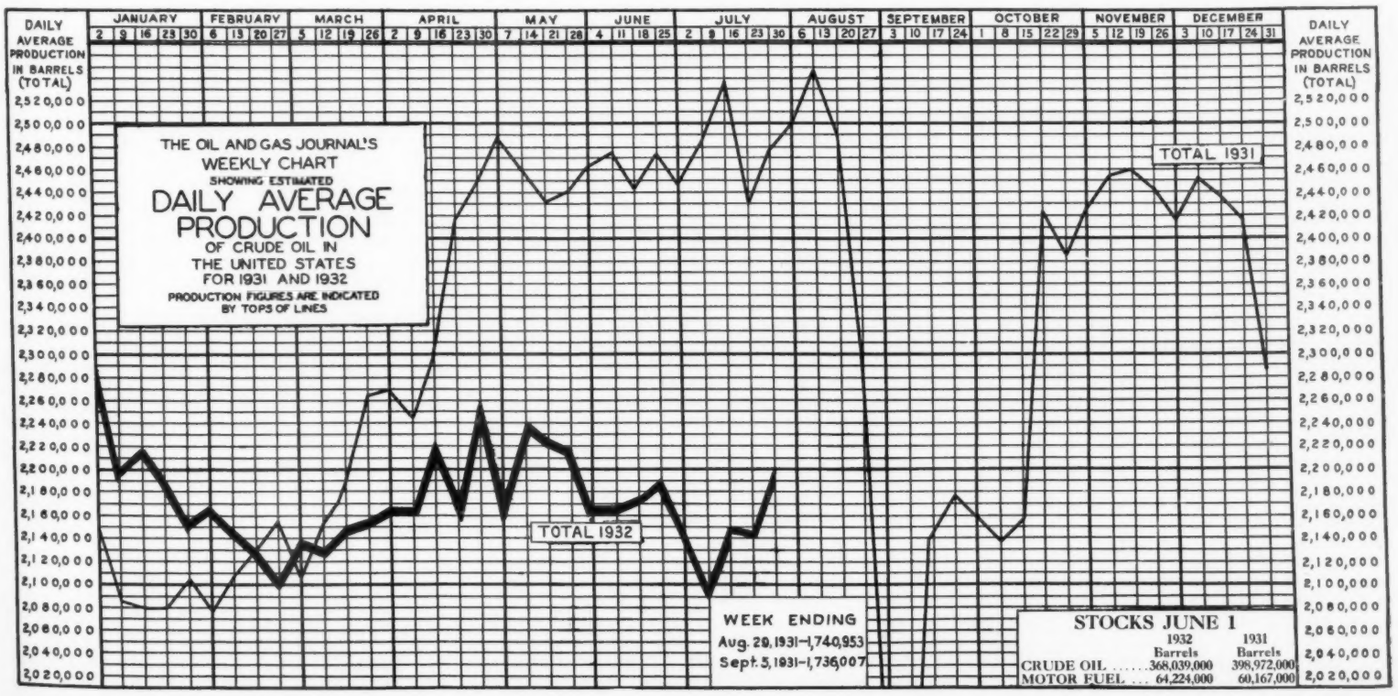


Proration Plan Suggested for East Texas Which Will Insure Greatest Ultimate Recovery

By L. G. E. BIGNELL
Petroleum Engineering Editor

Controversies existing throughout Texas over methods of prorating different oil pools and especially regarding the output allowed in East Texas can be settled quickly, equitably and with entire assurance to each and every operator that he will obtain the maximum yield of oil from his property at a minimum of expense. After all the hearings held in Texas on proration, many may doubt the above statement. But the fact remains sufficient data are now available on conditions in the East Texas Field to convince the most skeptical that bottom-hole pressures constitute the most accurate and reliable record of what is taking place in the producing horizon and that this record should be the basis for calculating the allowable production of the field.

Production in the East Texas Field comes from the Woodbine sand. This sand outcrops between Dallas and Fort Worth. Water enters the sand there and the water in this sand is the driving force which propels the oil from the sand and to the wells. This water has a hydrostatic pressure of 1,650 pounds to the square inch. This water at the field has a temperature of 140° F. Water at this temperature and under such a pressure is ideal for washing the sand of the oil and insuring a maximum recovery.

Property Owners Are Fortunate

Owners of properties in the East Texas Field are indeed fortunate in having such a condition, as it provides not only an ideal drive for the oil but insures a maximum recovery from the sand if properly utilized.

Such a reservoir energy should be used in such a way as to obtain the maximum results and benefits for property owners. If utilized properly, it is estimated as high as 90 per cent of the recoverable oil in the pool can be obtained from flowing wells, thereby reducing recovery expenses to a minimum.

This water, under pressure, moves into and through the sand to take the place of oil and gas removed from the sand through the wells. If the rate of withdrawal of oil from the sand is faster than this water can fill the voids, pressures at the bottom of wells show a decline. These voids in the sand constitute a danger of the water, under higher pressure than exists in the voids, moving through the sand and trapping large quantities of oil which never can be recovered.

The condition which will insure the greatest recovery for each property owner and constitute true conservation of these natural resources of the State of Texas is to have this water rise through the sands at a regular rate and form uniform water levels throughout the entire area instead of varying points of contact between oil and water as is now the case. It is believed that the rise in water level throughout this field can be maintained at a uniform level if bottom-hole pressures are held at a constant.

Correlation of Withdrawals

In other words, if the withdrawal of crude oil from the sand in East Texas were made to conform to the water movement in the sand, bottom-hole pressures would remain constant. Stating the matter in another way, if bottom-hole pressures in the East Texas Field were held at one level, the production of the entire field under those conditions would be that quantity which was being displaced by water in its natural movement.

For over a year there has been a constantly recurring problem of allocating to the various fields of Texas their proportion of oil that they would be permitted to produce in accordance with the orders of the Texas Railroad Commission. Under date of August 21, 1931, House Bill 25 was passed and entitled a "Conservation Bill" setting forth the amended statutes governing the production of oil and gas in the State of Texas.

Under this law the Railroad Commission has issued orders from time to time limiting the amount of oil and gas that could be produced from the various fields of the state and these rules have been based upon the prevention of "waste" which has been quite clearly defined in the HB 25, which states in part:

Underground Waste Defined

"Neither natural gas nor crude petroleum shall be produced, transported, stored, or used in such manner or under such conditions as to constitute waste; provided, however, this shall not be construed to mean economic waste, and the commission shall not have power to attempt by order, or otherwise, directly or indirectly, to limit the production of oil to equal the existing market demand for oil; and that power is expressly withheld from the commission and no part of this act shall ever be construed so as to prevent the storage of oil except for the prevention of physical waste."

The act then specifically states what shall be included under the term "waste" and among these provisions will be found the following:

"(b) Drowning with water of any stratum capable of producing oil or gas or both oil and gas in paying quantities.

"(c) Underground waste caused by the premature intrusion of water into any producing well or wells or into wells producing from the same stratum, resulting from improper drilling or producing methods by the owner of such well or wells."

"(k) Waste incident to the inequitable utilization of gas energy, water drive, or other natural force, resulting from the inequitable withdrawal from any common pool; provided, however, that the commission shall only invoke this definition of waste for the purpose of preventing discrimination in production as between producers disposing of their oil and/or gas by means of regulated carriers and those producers disposing of their oil and/or gas by means of unregulated carriers."

The application of these laws to the various pools of Texas has caused much discussion and argument and it now seems that attention can be directed to certain well-known facts concerning the East Texas Pool in particular that may lead to more equitable orders governing the rate of production from that area.

Allowable Fixed

In orders issued since the military shutdown of August, 1931, it has been customary to limit the field as a whole to a certain quantity of oil per day and to further state that each well within the pool should be allowed to produce only a limited number of barrels of oil per day. This daily allowable per well has been gradually reduced until it is now 46 bbls. and with the drilling of additional wells will be further reduced until it is anticipated that eventually the allowable per well will be as small as 26 bbls. daily.

The reason for placing the allowable for the field at 325,000 bbls. per day has never been clearly defined, and while it appears to have served its purpose quite satisfactorily, it now seems that there should be other ways of arriving at the allowable production for the East Texas Pool which wil be more equitable and based upon good modern engineering and production practice.

To incorporate these new regulatory measures into rules to be issued by the Texas Railroad Commission will require that the commission secure much additional data. As engineers have already been appointed to secure information for the commission in Conroe Field, Montgomery County, and Yates Pool, Pecos County, Texas, it is now suggested that engineers be assigned to the work of securing correlated information from the East Texas Pool which can later be used to formulate rules for production in that area.

Rate of Water Movement

It has long been recognized by production men and geologists operating in the East Texas Pool that there exists a fixed rate of water movement to the withdrawal of oil and gas from that area. It has been agreed that the original water level in the East Texas Pool was about minus 3,320 feet below sea level and that this body of water is in contact

New Proration Plan Suggested for East Texas

THE accompanying suggestion for a new basis for regulating production in the East Texas Field is made after a close and impartial study at first hand of conditions existing in the field and after data procured on trips to the field had been checked and rechecked with engineers, production men, geologists and others representing all classes of operators interested in the development of that vast area.

The water head which is effective on the west side of the field is the principal natural agency tending to maintain in the reservoir pressures through displacement of the withdrawn contents. This hydrostatic pressure is maintained at the East Texas Field by the entrance of meteoric waters into the Woodbine sands at their outcrop between Dallas and Fort Worth.

It has been found by the use of bottom-hole pressure gauges that this water is under a static pressure of about 1,650 pounds per square inch, and its temperature is approximately 140° F. These conditions will set up an ideal means for flushing and cleaning the sands of their entrapped oil if the rate of withdrawal of this oil and gas is made to conform to the natural rate of movement of this water through the formation so that it may replace the oil and gas uniformly.

It is suggested that a uniform bottom-hole pressure can be maintained throughout the field if rate of withdrawal of oil and gas is correlated with the natural rate of movement of water through the pore space in the reservoir and by such regulation it seems safe to assume that a much higher ultimate recovery of oil and gas will be secured at a minimum of lifting costs, and the minimum amount of oil will be left in the sands after the water flood has passed through them. This control will also prevent water from channeling through the sands and coning up around the wells and cutting off recoverable oil.

The Oil and Gas Journal recommends this plan to the consideration of the Texas Railroad Commission, believing it to be to the best interests of every operator in the field. It suggests that instead of regulations being based upon a permitted production of approximately 325,000 bbls. daily, the regulations provide that uniform bottom-hole pressures must be maintained and that the field be permitted to produce whatever quantity of oil it will yield without decline in bottom-hole pressures.

with the producing sands in a level plain across the field from west to east and the water is moving into the sands in a series of approximately horizontal levels as the oil and gas is produced.

Based upon past experience with production from the Woodbine sand of the Balcones fault line fields of Texas, it has been stated that for every 20,000,000 bbls. of oil produced this water level will rise 1 foot in the producing zone. With a production of about 175,000,000 bbls. of oil to date the mean water table for the field should now be at about minus 3,311 feet below sea level. This fact has not been established definitely but it is believed that it can be proven by the correlated work of a staff of engineers operating under orders from the Railroad Commission.

As this water is under a hydrostatic head of about 1,650 pounds per square inch it is further believed that if properly controlled it should serve to flush practically all oil from the sand reservoir in this field. This is further substantiated by the fact that this water has a temperature of about 140° F., which should make it ideal for a natural water flooding and sand washing in the area.

As the law states that one form of waste is incident to the "inequitable utilization of gas energy, water drive, or other natural forces" it seems only logical to assume that the Railroad Commission should have the power to enforce rules governing the rate of movement of this natural water drive within the East Texas Field.

There are a number of fields that have been subjected to a natural water drive that will furnish data upon which to base procedure in the East Texas Field. It is understood that engineers for the U. S. Bureau of Mines have made some tests in East Texas securing bottom-hole samples of oil and gas and also taking bottom-hole pressure and temperature readings.

The commission has already issued orders requiring the installation of 500-pound capacity spring gauges on both the tubing and casing at the head of each flowing well in this field and requires that report be made daily of one reading taken when the well is shut in and another when flowing. With additional data it seems possible to correlate, at least to some degree, the relation between bottom and top-hole pressures and then with recording gauges at the wellhead producing conditions for each well would be made known to the representatives of the Railroad Commission having charge of this field.

Greater Ultimate Recovery

This move would be in line with true conservation of natural energy found within this pool for it has been stated by competent engineers that observations taken in pools with and without the effect of water drive in the producing formations show those pools where no water movement has been effective have produced only from 12 to 15 per cent of the content of the reservoir whereas other pools where natural water drives have been effective have produced from 40 to 70 per cent of the reservoir contents.

From this it seems that if the East Texas Pool is allowed to produce without complete utilization of the natural forces of the water drive there is bound to be left a lot of unrecoverable oil in this field.

For comparison the conditions set up in the Bradford Field of Pennsylvania may be considered. This field is of about the same area as East Texas, having 102,000 acres within its boundaries but because of its early method of production the recovery was only about 2,450 bbls. per acre before the application of artificial water drive methods to secure additional production. This artificial water flooding has now been practiced in Bradford Field for about 30 years in a constantly increasing degree until now the field is capable of producing in excess of 29,000 bbls., the daily demand for this oil.

Operators in the Bradford Field recognized long ago that artificial water flooding of the sands there would secure additional oil but it was not until 1920 that introduction of water into the producing formation was legalized by Pennsylvania law.

If those conditions existed in that field and were recognized long ago by the operators there it seems only logical that operators in the East Texas Field should now recognize the possibilities of utilizing the natural water drive in this newer field while there is still opportunity to make it effective instead of continuing on at the arbitrary rate of 325,000 bbls. without regard to the natural relation between rate of water movement within the reservoir to the rate of withdrawal of oil and gas from the producing sands.

Utilizing Water Drive

Many operators recognized early in the life of the East Texas Field that there was a fixed relation between water movement through the Woodbine sand to fill the voids created by the withdrawal of oil and gas, but because of the diversified interests in the field felt that it would be impossible to secure any majority consent to the application of this theory to their production problems.

It would now seem that many things have changed that will make it advisable for the Railroad Commission to recognize what has long been regarded as a fact, that is, that water under a hydrostatic pressure of 1,650 pounds per square inch and at a temperature of about 140° F. lies adjacent to the bottom of the producing zones in this field and will create a natural flooding condition if the rate of withdrawal of the oil and gas is correlated to the water movement upward through this producing horizon.

Many bottom-hole pressure readings have been secured in the East Texas Field and have been used to produce maps showing zones of equal pressure in the field. This work has been carried on by about 15 companies but only about 150 control wells used. As there are now about 7,000 wells in this field it seems desirable that some central engineering body under the Railroad Commission should take over this work and secure additional data.

Pressure Changes

That the bottom-hole pressures are affected by water movement in the reservoir was shown quite clearly during the shutdown period in August, 1931. During that period bottom-hole pressures built up appreciably and tended to equalize still further under the restricted rate of withdrawal placed in effect when the field was again allowed to produce.

That the rate of withdrawal of oil and gas has been higher than the rate of movement of the water into the voids created by this removal of production is indicated by the fact that there has been a constant drop in bottom-hole pressure of from 5 to 9 pounds per month. If the oil and gas production rate and water movement had been equal it seems only logical to assume that bottom-hole pressures in the various portions of the field would have been maintained at about a constant.

Under conditions that now exist in the East Texas Field both as to rate of production and rate of drilling there is a wide difference in bottom-hole pressures in this field and this seems unnecessary if some regulatory measures were put into effect that would require that rate of withdrawal of oil and gas be correlated with rate of water movement within the reservoir. By such regulations it should be possible to build up low-pressure areas in this field due to energy secured from the water movement and delay the formation of low-pressure areas caused by withdrawal of large amounts of oil and gas from areas where close drilling has been practiced.

It is admitted that to do this will require the application of rules that are only enforceable by somebody such as the Railroad Commission, but it is in the line of true conservation of oil and gas within this area and should lead to a longer natural flowing life for the wells and to greater ultimate recovery of oil and gas from this natural reservoir.

Losses Probable

If the field is allowed to be produced under any arbitrary rate arrived at without due consideration of all facts that are available it seems only logical to assume that there will develop in time areas from which it will be difficult to secure as large a proportion of the oil and gas as might be secured if the natural water drive were made useful.

To say that the application of modern methods of production to this area because of its size and diversified ownership is not possible is to beg the question of authority of the Railroad Commission and the true interpretation of the law covering the conservation of oil and gas within Texas.

Many engineers and production men have recognized the possibilities in the direction of applying the natural water drive to the securing of greater ultimate recovery from East Texas, but have admitted that it cannot be done by any co-operation between companies operating there because there would always be a minority interest who would object to such regulations being applied to their properties.

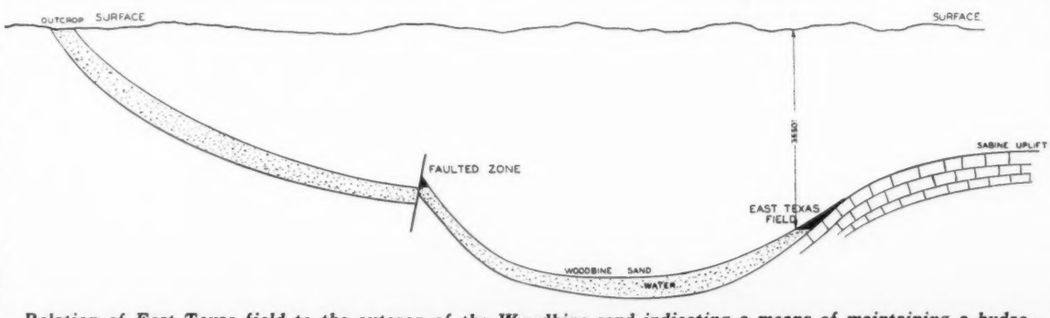
As a matter of fact it is strongly felt that every owner of leases in this field would be benefited ultimately if such general rules covering conservation of the water drive energy common to this pool were established and enforced. Without them the ultimate recovery per acre will be varied over wide ranges and it has been stated that areas of low pressure will drain oil from high-pressure areas because without equalized bottom-hole pressure conditions being set up by the utilization of pressure from the natural water drive the oil and gas will move through the sands from high to low-pressure zones.

New Rules Needed

To the end that true conservation may be applied to this field and waste incident to inequitable utilization of water drive may be avoided it is now suggested that the Railroad Commission give careful consideration to the appointment of an engineering committee made up of competent men supplied with proper instruments and equipment to secure bottom-hole pressure readings and other data in a sufficient number of wells in this field to permit a careful study of the production problems.

When the areas of the same bottom-hole pressures have been determined it should follow that rules for producing oil and gas for the field could be issued that would tend to equalize pressures over the entire field and make effective the natural energy of the water drive through the sand reservoirs in the pool to the end that these sands may be flushed of their oil and gas content and the ultimate recovery of the field be increased and the true conservation of these natural resources of the State of Texas be accomplished for the benefit of all interested therein.

The lessons learned in other fields that have produced without the application of modern engineering science should serve to guide the Railroad Commission in its future orders governing the production rate in East Texas and by the application of modern methods it should be possible to interpret the conservation laws of Texas in fact and spirit and remove the menace now facing the operators of East Texas if production is continued under present methods without regard to natural laws which will affect this field, and which may profitably be applied to secure proper production, rather than be allowed to ultimately force water into portions of the sand ahead of the oil and thereby lose that production for all time.



Relation of East Texas field to the outcrop of the Woodbine sand indicating a means of maintaining a hydrostatic pressure on the producing sands. From article by D. R. Snow in The Oil and Gas Journal of April 21, 1932

A. P. I. Directors Feel Big Problem Is to Hold Benefits Achieved by Stabilization Efforts

By TOLBERT R. INGRAM

COLORADO SPRINGS, Colo., July 23. The big problem before the oil men today, as expressed at the meeting of the directors of the American Petroleum Institute at the Broadmoor Hotel on Friday, July 22, and in conferences preceding that gathering, is to hold fast to the benefits which already have accrued from the long and tedious efforts to stabilize the industry and continue the progress that has been made. That means that when an unexpected decline in consumption takes place, adjustments all along the line must be made to hold an even balance.

Charles F. Roeser, vice president of the Institute and chairman of the division on production, summarized the general opinion of present conditions when he said that he did not believe there will be any downward trend; that the industry has turned the corner and is making progress; that it has been fairly well stabilized; and that the important thing now is to keep it that way. In order to do that an equitable solution of immediately pressing problems is necessary. These include the bringing into line and stabilizing the difficulties arising out of the decrease in consumption at a time when stocks of petroleum products are increasing. This will involve the question of withdrawal from stocks of crude as well as crude runs to stills. Tax evasion and class discrimination in tax matters and the bringing together of statistical data to find out the facts as to production and consumption and future requirements are other important problems calling for an early solution.

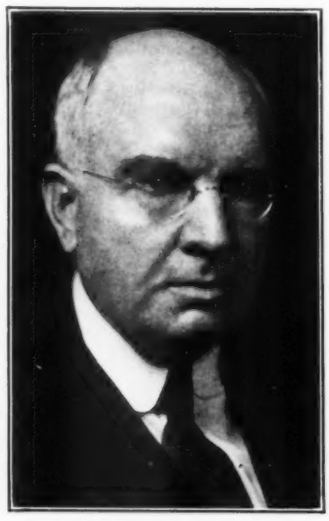
Informally Discuss Hill Plan

Around the meeting of the directors of the Institute there centered several other meetings. These included a meeting of the legal subcommittee of the committee on production practices, the oil states advisory committee, which is independent of the Institute, and several smaller bodies. A discussion of Thurman Hill's plan of reducing crude oil production to 2,000,000 bbls. per day and the expression of the hope that if such a move were consummated it would justify an increase in the price of crude, frequently was heard. William R. Boyd, Jr., executive vice president of the Institute, clarified the situation by explaining that the directors come together to discuss the economics of the industry, study its statistical position and to help its members to become better informed on conditions. The board takes no action on anything and foregoes all discussions of policy or prices. In accordance with this practice, the meeting Friday morning was given over entirely to discussing the economics of the situation, studying numerous charts on production and consumption and to hearing reports of the committee.

The first body to go into action was that of the legal subcommittee of the committee on production practices which held daily meetings beginning Monday. R. E. Hardwicke, of Fort Worth, is chairman of this committee. A number of petroleum engineers met with the attorneys and the entire week was taken up in discussing technical problems. The committee found its task a rather large one and no report to the directors of the Institute was made. The subcommittee reported to a meeting of the committee on production practices at which it was decided more time was necessary in which to formulate a concrete plan for submission. Mr. Roeser and Mr. Hardwicke expressed the opinion that at least two months' time will be required and that the plan probably will come before the October meeting of the directors.

Oil States Advisory Committee

Early in the week the stage was set for a discussion on Thurman Hill's plan



AMOS L. BEATY

President, American Petroleum Institute.

for better crude prices through curtailment of production and the limitation of withdrawals from storage. Mr. Hill is a member of the Oil States Advisory Committee, representing the governors of oil producing states and a member of the Kansas Public Service Commission. He came to the Colorado Springs meeting after having conferred with oil men at meetings in Oklahoma and Texas which, he says, were found to be receptive of the plan. Most of the members of the Oil States Advisory Committee also were at Colorado Springs and held a number of informal conferences. A formal meeting will be held later.

Mr. Hill's proposal, as stated before the directors Friday night, is to reduce production in American fields to 2,000,000 bbls. per day; reduce storage withdrawals to approximately 50,000 bbls. per day, operators advising state officials 30 days in advance of amounts to be withdrawn; and requirements in excess of 2,000,000 bbls., plus the withdrawals, less exports, shall be taken from the producers, particularly from areas now being deprived of an adequate outlet. In previous discussions, he held that if this is done, conditions would justify an increase in price of 25 cents per barrel for crude.

The Oil States Advisory Committee, in making up its schedules of requirements and portioning these out among the different oil-producing states, takes into consideration production, imports and storage, but Mr. Hill says the committee has been in the dark as to definite information on oil run to storage and withdrawals. It is estimated that withdrawals have been running at the rate of 200,000 to 250,000 bbls. per day. This estimate is based on daily average production, less exports, plus crude run to refinery stills. Amos L. Beaty, president of the institute, was quoted as saying the withdrawals are much less than these estimates and that the discrepancy most likely arises from crude being taken from East Texas for which there is no accounting.

Want Figures on Withdrawals

Commissioner Hill says that there is no reason why he, or members of the advisory committee, should not discuss prices, since they represented the states, and that the oil states never again are going to permit the oil companies to reduce prices below the point where the operators cannot make expenses. Before appearing before the directors he said he was prepared to ask for definite schedules of withdrawals from storage, just as

CHARLES F. ROESER

Vice President Institute and Chairman Division of Production.

definite statements of production are made. Three companies already have begin filing these statements upon oral requests. If others do not respond, he proposes upon his return to Kansas to issue an order for statements of crude run to storage and withdrawn. He claims the authority under the law and other members of the advisory committee present confirmed this opinion and approved of his stand.

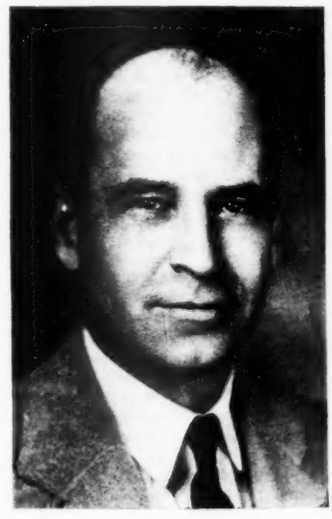
The piling up of large stocks of gasoline in storage by the refiners in the main consuming season was freely discussed as one of the principal factors needing adjustment to keep the industry stabilized. The danger of distress gasoline going on the market in the coming off season for consumption is recognized by the refiners and steps are being taken which it is hoped will bring some relief. A break in the price structure for refined products undoubtedly does have an effect on crude prices. This may be psychological in part, as far as the public is concerned, but the menace is there. Refinery practices as an operating and economical problem take into consideration some factors not present in crude production.

There was considerable talk of gathering figures on withdrawals from storage and refinery runs on a weekly basis, but there is some objection to this plan. W. H. Ferguson, vice president of the Continental Oil Co., explained that the tendency of refiners is to budget their monthly requirements and run their plants full blast until the required quota is produced. The plants are then shut down. This is partly an adoption of the furlough plan being put into practice to relieve unemployment as well as to economize on costs. Weekly figures, under these conditions, are unsatisfactory and do not show the real trend. Mr. Ferguson pointed out that if the refinery statistics are made available by the tenth of each month they will be more representative of the trend and will be in time to give the information needed.

Several refiners emphasized that the present need is for the industry to hold its own and to stress the importance of getting off of an artificially stabilized condition and into normal stabilization as soon as possible. An unknown factor just at present is the effect that the new excise tax on imported petroleum and products will have on the situation.

Gasoline Taxes and Evasion

Gasoline taxes, the menace of bootlegging becoming a racket greater than any other this country has seen, the effect excessive collections is having on consumption of petroleum products and the danger of tax evasion upsetting the markets was one of the live subjects discussed at Colorado Springs. Mr. Boyd had presented to the board recently a resolution proposing the appointment of a special committee to oppose any further increases in Federal, state and municipal taxes on gasoline, lubricants or other refined products and to protest and oppose unreasonable license fees, occupation taxes, etc., affecting the industry. The purpose of the resolution was to perfect machinery for protecting the oil industry from unreasonable laws on weights and measures, fire and safety provisions, storage rules, the regulation of delivery equipment, etc., as well as excessive taxes. It provided for a paid chairman and secretary and for the financing of the committee outside of the budget of the institute.



THURMAN HILL

Public Service Commissioner of Kansas.

Mr. Boyd explains that the resolution was not prepared with the expectation that it would be adopted, but to get the subject before the directors and to bring about a general discussion among the oil men. He expressed the hope that it will lead to the adoption of some definite plan

to hold in check or abate the menace that is threatened. Mr. Boyd said that the question of pyramiding taxation of motor vehicle owners and the evils arising therefrom presents a problem of national significance. To illustrate, he said, the average gasoline tax of 48 states is more than 4 cents per gallon. This tax produced in 1931 a total of $540,000,000, a sum equivalent to 100 per cent on the wholesale value of the product. In addition to this almost confiscatory impost, the Federal Government has recently enacted a 1-cent tax which increases the taxation to 125 per cent of the average wholesale value of the product. Continuing, he said:

"Forgetting for the moment the rank injustice of levying a tax of more than the value of the product and the grave trend of this form of class legislation that makes one group pay 10 per cent of all forms of taxation as a penalty for owning an automobile, the economic results are already being seriously felt. This outrageous tax is curtailing consumption of gasoline to an alarming extent. A decrease in the consumption of the gasoline means a decrease in automobile registration and ownership, and this in turn vitally affects not only the oil industry but such allied industry as steel and others."

Losses From Bootlegging

Estimates were made that bootlegging already is causing a loss of $90,000,000 a year to the tax-collecting agencies and that this loss is small in comparison to the damage it threatens through the development of evasions by racketeers who see in the increasing opportunity a better profit than in the bootlegging of liquor if the present tendency continues. State bodies already are active in the work of combating the growing evil and the opinion was freely expressed that it is highly desirable to concentrate these movements into one comprehensive plan. Colorado has taken a step forward by initiating an amendment to the state constitution to be voted upon in November. It proposes to amend Article 10 by adding a new section as follows:

"Section 17.—On and after June 1, 1933, an excise tax of more than 3 cents per gallon on gasoline or any other liquid suitable for the generation of power in internal combustion engines shall not be imposed by the general assembly or collected by the State, but the general assembly may provide by general law for refunds of such portion of said tax as may be paid on such liquid which is not used in the operation of motor vehicles on the public highways of the State. The proceeds from such tax, after deducting the costs of collection, shall be used solely for the construction, improvement, repair and maintenance of public highways in the State, and such part of such proceeds as is apportionable to the city and council of Denver on the basis of gasoline sold in said city and county shall be transferred to the state highway fund and used only upon the mountain parks system of highways and upon such roads as are now or may hereafter be designated as 'Federal aid highways.' Fifty per cent of the remainder of said tax shall be distributed among the several counties, other than the city and county of Denver, in proportion to the number of gallons of gasoline sold in each county, and the remaining 50 per cent shall be used by the state highway department only in the construction, improvement, repair and maintenance of a main system of highways in the State, including connecting links through cities and towns. If such an excise tax be imposed by the general assembly the same shall be in lieu of all other excise taxes imposed by this State, or any political subdivision thereof, on gasoline or any other liquid suitable for the generation of power in internal combustion engines, and while such tax is in effect the several counties of the State shall not levy an ad valorem tax for road and bridge purposes in excess of 1 mill on the dollar of valuation."

Industry Out of the Red

The most encouraging feature of the Colorado Springs meeting was the prediction by a number of oil men that if the industry can hold for the remainder of 1932 its present position that the oil companies will be out of the red for the year and into the black. It was pointed out, however, that large profits may not be expected and should not be expected under present conditions. The industry is taking a leading position in the travel back to stable economical conditions and every effort should be made to hold what has been gained.

After the adjournment of the meeting President Beaty issued the following statement:

"The week has been devoted principally to operating problems of the producing branch of the oil business. The legal subcommittee of the production practice committee, composed of three lawyers and a group of engineers, geologists and operating heads, spent five days in the consideration of technical questions. The conservation of reservoir energy and the adjustment of correlative rights between landowners were discussed at length. The old theory of the right of capture in the light of modern engineering knowledge, and the best way of putting this knowledge into practical effect, were among the chief topics. The subcommittee reported progress to the production practice committee, of which Charles F. Roeser of Fort Worth is chairman, on Thursday. Then on Friday the board of directors of the Institute held its meeting. The board meets monthly, and this meeting was timed with the thought of receiving a report from the production practice committee. One of the advantages of holding the meeting in Colorado Springs was that it might be convenient for the California members of the board to attend. Two of them did attend. There was a fairly representative and interesting meeting of the board. Its deliberations followed the usual course of such meetings.

"The board did not consider any plan for the curtailment of production."

Those in Attendance

Among those attending the meeting were: Amos L. Beaty, New York, president, American Petroleum Institute; William R. Boyd, Jr., New York, executive vice president, American Petroleum Institute; Charles F. Roeser; C. A. Young, Dallas, secretary, division of production; Lee Barrows, Fort Worth, The Texas Company; C. P. Dimmitt, Bartlesville, Okla., Phillips Petroleum Co.; E. J. Gaylord, San Francisco, Standard Oil Co. of California; E. H. Griswold, Ponca City, Continental Oil Co.; W. H. Ferguson, Denver, Continental Oil Co.; Harvey Hardison, Midland, Tex.; R. V. Kelley, Fort Worth, Pure Oil Co; F. H. Lahee, Dallas, Sun Oil Co.; J. R. McWilliams, Tulsa, Skelly Oil Co.; H. N. Marsh, Los Angeles, General Petroleum Corp.; Wallace Pratt, Houston, Humble Oil & Refining Co.; F. O. Prior, Tulsa, Stanolind Oil Co.; W. W. Scott, Houston, Humble Oil & Refining Co.; F. E. Wild, Standard Oil Co. of Indiana; W. T. Waggoner, Fort Worth; H. H. Baker, Houston, Humble Oil & Refining Co.; John T. Barnett, Denver, Mountain Producers Corp.; R. E. Hardwicke, Fort Worth; J. Edgar Pew, Philadelphia, Sun Oil Co.; J. A. Vickers, Wichita, Vickers Petroleum Co.; L. P. St. Clair Union Oil Co. of California; Earl Oliver, Ponca City, Okla.; Frank Phillips, Bartlesville, Phillips Petroleum Co.; W. N. Davis, Bartlesville, Phillips Petroleum Co.; R. C. Holmes, New York, president, The Texas Company; C. B. Ames, New York, The Texas Company; R. Ogarrio, New York, The Texas Company; E. G. Seubert, Chicago, president, Standard Oil Co. of Indiana; E. A. Bullock, Chicago, vice president, Standard Oil Co. of Indiana; L. L. Stephens, Chicago, counsel, Standard Oil Co. of Indiana; W. T. Holliday, Cleveland, president, Standard Oil Co. of Ohio; Henry M. Dawes, Chicago, Pure Oil Co.; L. L. Marcel, Kansas City, White Eagle Oil & Refining Co.; W. G. Skelly, Tulsa, Skelly Oil Co; Frank Coates, Cities Service Co., New York; P. M. Miskell, Tulsa, Cities Service Co.; Judge F. W. Freeman, Denver; C. M. Cox, Cheyenne, Wyo.; William H Cooley, Bakersfield, Calif.; Judge Cullen F. Thomas, Dallas, Tex.; T. H. Barton, Arkansas, and Thurman Hill, Topeka, Kans.

Americans, British and Rumanians Agree On Stabilizing of World Petroleum Markets

American and British oil representatives at the world oil conference in Paris have reached an agreement with Rumanian producers looking toward curtailing price wars and opening the way toward increasing prices and limiting production in Rumania. The Russians were not taken into consideration or approached during the Paris meetings.

A statement issued by the conference was in general terms, the details being held back to permit the Rumanian delegation to report to the Oil Association in Bucharest. The agreement goes into effect immediately, as all the delegations promised to abide by its terms pending formal ratification.

The most important passage in the statement is that:

"Stabilization will be obtained by reciprocal engagement to respect relative positions as regards exportations of both groups on the markets."

This, a Royal Dutch-Shell representative said, means that no interest will encroach upon another's natural or already gained market.

Rumania's Position

A Rumanian delegate told the New York Times' Paris correspondent that the entire industry in his country was expected to back the accord because the representatives of the independent producers who attended the conference also initialed the agreement. More than 70 per cent of the Rumanian oil industry is controlled by American and Anglo-Dutch interests and it is understood they forced the independents into line. The same delegate said the Rumanians' support had been dependent upon prices being raised so that the same profits could be obtained despite curtailed production.

Though conference officials denied that "stabilization" necessarily meant raising prices and cutting production, it is taken for granted that the industry cannot be stabilized without both those things. It was learned that both topics were discussed without an agreement being reached as to exactly how much prices should be increased and production reduced, the percentage being left open for settlement.

It was said that since the Russians control only 13 per cent of world oil production they cannot very well flood the markets or seriously damage the interests of the other producers.

As Seen in New York

Increased prices as a result of the Paris agreement are likely, it is said in New York, to result only in countries and localities where active price wars have been raging, notably in England.

The conference was interested only in markets outside the United States. To maintain world oil markets abroad on a reasonably stable basis it is believed it will be necessary for the large oil companies to buy quantities of petroleum products from various sources, and it is understood arrangements have been made to prorate such purchases in proportion to the quota of each company in each particular market.

In dealing with the Rumanians, as with the Russians in the earlier conference in New York, which broke up without any agreement, the principal points discussed were the export quotas of each country and the prices the international oil companies were willing to pay for surplus oil.

Charles E. Arnott, president, and Harold F. Sheets, vice president, of the Socony-Vacuum Corp., plan to inspect the European properties of the company following the conference. H. L. Pratt, chairman of the company, will accompany them on their trip.

Most Far-Reaching Step in History of Industry

Commenting on the "gentleman's agreement" entered into by the leading companies in the international oil markets, the New York Times says it is considered the most far-reaching step in the history of the industry, including the provision for joint action in the solution of any problems threatening to disturb the stability of world markets, whether these arise from Russia, Rumania, Iraq, Venezuela or any other source. If production caused by any of these companies is greater than demand, concerted action will be taken to bring about a balance. The agreement also means that the costly price wars which have been carried on among some of the large companies will cease.

The Oil and Gas Journal, which, as early as October 27, 1927, editorially declared that the "interests of every man in the domestic oil industry are bound up with the developments in the fields and markets abroad," repeatedly advocated such a world agreement and urged in an editorial July 11, 1929, that "What is needed is a world adjustment that will stabilize production and prices on a basis of essential values."

Inquiry Made for 8,000 Tons Natural Gas Pipe

NEW YORK, July 26.—The Standard Oil Co. (New Jersey) has made inquiry for 8,000 tons of 20-inch pipe which will be used in extending the company's present natural gas pipe line system in the Tioga Field later on in the year if present plans carry through, it was learned here today.

While the fact that the company had asked tenders on the pipe was confirmed, nothing definite could be learned in connection with the plans for new pipe line construction and it was indicated that no announcement in this connection could be looked for until some time in the fall.

This quantity of pipe represents about 46 miles.

COLON PRODUCTION

Production of Colon Oil Corp.'s subsidiary in Venezuela for the week ended July 15, was 120,204 bbls.

Gasoline Advertising Shows Changes in Quality of Products and Attitude of Consumers

By C. O. WILLSON

With the oil industry now in the midst of the main gasoline consuming season of 1932 the activities of many companies are centered on devising means to maintain or increase their gallonage under conditions never more competitive since motor fuels and oils became major commodities.

A study of advertising as it has appeared in newspapers and national publications over the past month furnishes a panoramic picture of conditions both within and outside the industry, having significance from the viewpoint of attracting consumer interest in the purchase of gasoline and lubricants. The effects of the depression, the bootlegger, service, tourist season and the changing specifications of products made possible by improved manufacturing processes are all reflected in the advertising and sales activities of individual companies.

The advertising for the most part aims at establishing consumer acceptance of branded products as refined and sold by the major companies. However, in a few cases, distributors have digressed from this plan recently with advertising aimed to bring about the greater use of cars by owners. Distributors living adjacent to attractive summer resorts, historic spots and scenic drives have emphasized this fact in all kinds of advertising media. The Olympic Games at Los Angeles, which start the latter part of this month and continue through the first half of August, have been featured, the distributors pointing to their station facilities along the main routes leading to Los Angeles. Western distributors have stressed this international event in the expectation that tens of thousands of car owners in all parts of the country will drive to the games.

The Texas Company, which distributes petroleum products in all states, has used maps of the United States in its national magazine advertising, showing the main highways leading to Los Angeles.

The Standard Oil Co. of Ohio in newspaper advertising throughout the State has explained to motorists the routes available to historic and scenic points. This advertising is supplemented with complete information from station attendants, including maps. A majority of the major distributors have map services.

Travel Bureau

The Continental Oil Co. probably has the most elaborate service to tourists, to which attention is being called at this time through all types of advertising. The company for several years has maintained a central travel bureau at Denver, Colo., for tourists. The bureau, in addition to answering inquiries at Denver and other points, sends out literature and maps of all kinds, covering the entire United States.

Based on reports up to this time, the Continental Travel Bureau will handle between 150,000 and 200,000 requests from motorists. This is more than double the quantity received last year, indicating the increasing interest of car travelers.

Service

The success of the Continental program obviously depends to a great extent on the training of service station employes, and this fact is reflected in advertising, in which the station attendant is featured.

"Every Red Triangle Station Is a Courtesy Station," the Continental advertising states. "A completeness of service unequaled in the oil industry is yours at every Conoco station. When we say 'service' we don't mean just gasoline, oil, water and air. Those things are to be expected. The service you find at Conoco station goes much further. It includes windshield and rear window wiping, accurate road information, package checking, sports, hotel and complete information for travelers, free road maps . . . and many helps that are yours as a result of every Conoco man's sincere desire to aid you.

"Every Conoco station is a branch of the Conoco Travel Bureau. A nation-wide free service for motor travelers."

Stress Quality

The great majority of the advertising appearing in newspapers and national magazines stresses quality of products. In most cases the regular grade of gasoline refined by the companies receives the most attention. This development contrasts with the situation of two to five years ago when advertising was generally used to exploit premium grades. Now practically all the major companies are emphasizing the properties of a regular grade, the improved quality of which, it is claimed, assures satisfactory performance to the car owner. Occasionally mention is made of a third grade gasoline, but most companies still consider this a competitive product to be sold to those customers who buy on a price basis only. A few companies have deviated from this policy in certain consuming sections, where they are attempting to meet a condition brought about by "price wars."

Map making department of the Denver, Colo., travel bureau of the Continental Oil Co.

Colonial Beacon

In New York and the New England states, the Colonial Beacon Oil Co., a marketing subsidiary of the Standard Oil Co. of New Jersey, uses newspaper advertising which is representative of that which goes into considerable detail relative to the properties of gasoline offered motorists. In regard to its regular grade of gasoline the newspaper advertising states: "Colonial Has Everything." It is:

"Carbon-Less. Spark plugs, pistons, cylinders and valves stay clean. Saves repair bills.

"Gum-Less. No clogged manifolds—No sticky valves. Cuts repair bills.

"Sulphur-Less. No corrosion. Saves repair bills.

"Anti-Knock. Extra power, less noise, less upkeep cost through reduced hammering of pistons and bearings. Cuts repair bills.

"Quick Starting. Minimum use of choke—quick power and pickup—less contamination of crankcase oil.

"Bubble Free. No stalling and bucking from vapor bubbles in gasoline and carburetor—even, steady flow of power in the hottest motor.

"Odor-Less. Refined 'sweet.' No disagreeable smells.

"Crystal Clear. Made clear, stays clear. A guarantee of perfect cleanliness. Saves money.

"Uniform. Same quality and results always, everywhere. Always more miles for your money."

Climatic Control

Some companies pick out a particular characteristic and stress that and say little or nothing about the other properties of their gasolines or oils. The Vacuum Oil Co., Inc., a subsidiary of the Socony Vacuum Corp., in its eastern marketing operations is emphasizing "Climatic Control" of its regular grade of Mobilgas gasoline. Regarding "Climatic Control" the company advertising states: "It is the preadjustment of specification of Mobilgas so that it automatically adapts itself to variations in 'engine heat' even as high as 400° F. caused by changes in temperature, altitude, humidity and road 'pull.' In Mobilgas Research Laboratories all these changing climatic conditions have been 'manufactured' in hot and cold testing chambers. Here engine tests are conducted day after day. The road performance of Mobilgas is thus scientifically verified at different 'engine heats' and its specifications are preadjusted before it is placed on sale in your locality."

The Phillips Petroleum Co. with its "Controlled Volatility" also recognizes the part volatility plays in motor fuel performance and alters the specifications of its gasoline with changes in seasons, taking into consideration the varying temperature ranges of the several areas in which it operates.

The Tide Water Oil Sales Corp., in pointing to the high antiknock rating of its regular grade of motor Tydol, is explaining a new method of determining antiknock performance in engines. Its advertising explains the use of an "Electric Ear" developed by an electrical concern to determine the relative knocking characteristics of gasolines.

Stale Gasoline

The Gulf Refining Co. has struck a new note in advertising the "freshness" of its gasoline. This is another phase of the greater knowledge of gasolines in relation to performance developed by the manufacturing departments. Several companies have changed their methods of operating so as to expedite the movement of gasoline from refineries to consumers. Scientific investigations have shown that gasolines kept in storage any length of time do lose desirable volatility characteristics and antiknock properties and also show a tendency to go off color.

The Gulf company is capitalizing on the fact that it has a number of widely scattered refineries which can quickly serve its stations, and the company in some recent advertising brings this to the attention of the consumers in the following manner: "You Pay for Power—Get It. Only fresh gas gives you all the power you pay for. Why? Because as gas gets staler, it gets weaker. Loses volatile 'easy starting' elements. Falls victim to chemical change—and gets sluggish and feeble.

"Another thing. The staler the gas, the stickier it is, and the more apt it is to knock.

"That's why Gulf is pleased to announce a system that assures you of getting fresh-made gasoline. Two things make this possible.

"First—Gulf refines out of its fine gasoline certain complex elements—the very elements that cause rapid deterioration.

Second, Gulf takes pain to speed this fresh gas to you in a hurry before it can get stale."

Sulphur Elimination

The Cities Service distributing units are emphasizing the elemination of sulphur in gasoline through laboratory control.

"The crude oils which make the best gasoline also contain sulphur. If this sulphur is left in gasoline, sulphuric acid forming compounds are formed when it burns in the combustion chamber. And sulphuric acid is highly corrosive—attacking cylinder walls, pistons, valves, any metal that it touches."

Fighting the Bootlegger

As a guarantee against substitution and tax evasion the Skelly Oil Co. has adopted three distinct colors for the three gasolines sold at its stations. The red color is for its Ethyl Gasoline, orange for its regular grade and white for its third grade. The Skelly advertising states:

"It's too bad but too true that at some gasoline pumps you may not know what you are buying. You may be paying for gasoline but may get a mixture of kerosene and 'synthetic' gasoline. At others 'bootleg' trucks may have driven up at 4 a.m. and filled up tanks of unscrupulous dealers with 'tax evasion' gasoline. Or, at another station you may be paying 'regular' prices for gasoline made to sell for several cents less.

"Tax evasion and gasoline substitution

(Continued on Page 16)

Shipments of Gasoline From California Affected by Adverse Market Conditions in 1932

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

Intercoastal movement of California gasoline was seriously affected by adverse market conditions during first six months of 1932 and total receipts of California motor fuel at Atlantic and Gulf Coast ports amounted to but 4,160,000 bbls., a decline of approximately 50 per cent from the 8,211,000 bbls. received in the first half of 1931 and less than half of the receipts of 8,789,000 bbls. and 9,527,000 bbls. for the first six months of 1930 and 1929, respectively.

While the reduction in shipments was due in large measure to lessened demand for the California product in the East this year, due to the sharper competition afforded by gasoline and motor fuel shipped from the Gulf, the decline was likewise due to a considerable extent to the fact that Richfield Oil Corp. of New York, which in the first half of 1931 drew the bulk of its marketing requirements from the parent Richfield Oil Co. of California refineries, received relatively little California gasoline at its East Coast terminals during the first six months of the current year.

Effect of Tariff

The import tariff of 2½ cents per gallon on motor fuel is expected to have a decided bearing on the position of California gasoline in Atlantic seaboard markets during the closing half of 1932, and it is expected receipts during the last six months will materially exceed those of the first two quarters. Shell Eastern, which has hitherto drawn all of its motor fuel supplies from the Royal Dutch-Shell refineries at Curacao, is now drawing on American Shell refineries in the Mid-Continent and in California for its supplies, and this development should be fully reflected in California shipment figures for the closing half of 1932. Other large marketing organizations, similarly affected by the new gasoline tariff, are also expected to turn to California for at least a part of their requirements. The situation created by the import tariff on motor fuel has not yet been fully reflected in statistics covering eastward shipments of California gasoline, due to the large quantities of South American gasoline imported in anticipation of the tariff, and replacement supplies from California will not be required in the East until all of this foreign gasoline has moved into consuming channels.

Major units in the industry now largely dominate the movement of California gasoline to the eastern seaboard, and shipments of the Pacific Coast product are thus controlled to the point where the California gasoline can be absorbed into eastern markets without disturbance to existing posted price schedules. Only one important deal affecting California gasoline in the East has been reported thus far in the year, involving five or six cargoes sold by a California company to the Baltimore and Providence terminals of an independent operating in East Coast territory.

California Surplus

California refiners have sought additional outlets for their surplus holdings of motor fuel in eastern markets this year, but owing to the extremely low prices prevailing on Atlantic seaboard markets, as well as the shortage of terminal and storage facilities available for handling "outside" shipments, business was lacking. California continues to hold its position as the largest holder of surplus motor fuel, and it is expected stronger markets in the East during the second half of 1932 will permit of the absorption of additional stocks from the Pacific Coast. At midyear, surplus stocks of gasoline held by refineries in principal refining areas showed California in the leading position, as follows:

	June 30—	
Refining area—	1932 (bbls.)	1931 (bbls.)
East Coast	6,063,000	7,558,000
Appalachian	1,509,000	1,558,000
Ind., Ill., Ky.	5,432,000	6,311,000
Okla., Kans., Mo.	3,246,000	3,284,000
Texas	6,209,000	7,927,000
Louisiana-Arkansas	1,509,000	1,541,000
Rocky Mountains	1,793,000	1,833,000
California	13,062,000	11,856,000
Total	38,823,000	41,868,000

While California gasoline holdings remain large, the recent trend toward reduction in crude production in that State, coupled with the program of reduced refinery operation on the part of California refiners, is expected to make for improvement in the statistical position on the Coast during the closing half of the year.

East Coast Handlers

The principal East Coast handlers of California gasoline thus far in 1932 have been Sun Oil Co., Standard Oil Co. of New York, Tide Water Oil Co., Standard Oil Co. of New Jersey, Atlantic Refining Co., The Texas Company, Cities Service Co., Richfield Oil Corp. of New York, and James B. Berry Sons Co. With Consolidated Oil Corp. expected to close for the acquisition of Richfield Oil Co. of California or Rio Grande Oil Co. (or possibly both) before the end of the year, it is expected that Sinclair will take its place as an important marketer of California gasoline in the East Coast territory.

Cities Service was expected to become a larger distributor of California gasoline in Atlantic seaboard territory, due to its reported control of Richfield, but shipment figures do not give any evidence of such a shift. Should some other company ultimately gain control of Richfield (in which the Doherty company is heavily interested) it is expected that Cities Service will acquire some other California producing and refining unit, although this does not necessarily imply that the California product will be brought to the East for distribution through the Cities Service marketing subsidiaries in this area.

The improvement in octane number and other qualities of gasoline refined on the Atlantic seaboard, which has been particularly marked during the first half of 1932, has resulted in placing the local product on a par with California motor fuel, so far as price is concerned, and California gasoline has sold in tank car markets at the same price level as Gulf and East Coast made gasoline. In former years, handlers of the California product were getting a preferential differential of one-quarter to one-half cent on much of their volume. In only one division of the industry, aviation, does California motor fuel now appear to have the call over first-grade gasoline refined locally or in other parts of the country.

The proposed consolidation of Standard Oil Co. (New Jersey) and Standard Oil Co. of California, which had been expected to materialize this year, is still not consummated and there are some indications that the deal will not be closed for some time. This consolidation would have an important bearing on movement of California gasoline to the East Coast, as it is probable, in the event of a merger, Standard of California's export business would be largely handled out of Jersey's foreign refineries, with the California company diverting some of its shipments of gasoline to American Atlantic and Gulf Coast ports.

While California gasoline has been largely used by marketers both on the Atlantic seaboard and at the Gulf in former years for blending with local gasolines for the production of premium motor fuels, a larger percentage of the California product is now being marketed in its "straight" form, due to the already improved characteristics of the local products.

Comparison of Receipts

A comparison of California gasoline receipts at Atlantic and Gulf Coast ports (almost entirely the former) by quarters for the first half of 1932 and the corresponding periods during the past three years follows:

	First quarter (bbls.)	Second quarter (bbls.)
1932	1,916,000	2,244,000
1931	4,403,000	3,808,000
1930	4,698,000	4,091,000
1929	4,827,000	4,700,000

Detailed data on California shipments, by weeks, for the first half of 1932, with comparative data for the past three years, are given in the accompanying table.

CALIFORNIA GASOLINE SHIPMENTS TO ATLANTIC AND GULF COAST PORTS FOR FIRST SIX MONTHS OF 1932, 1931, 1930 AND 1929
(Barrels of 42 gallons)

Week ended—	1932	1931	1930	1929
January 2	561,000	288,000	83,000	239,000
January 9	222,000	646,000	447,000	397,000
January 16	95,000	334,000	575,000	418,000
January 23	393,000	154,000	535,000	294,000
January 30	120,600	488,000	398,000	68,000
February 6	25,000	267,000	379,000	654,000
February 13	57,000	165,000	612,000	445,000
February 20	182,000	311,000	117,000	80,000
February 27	81,000	198,000	105,000	517,000
March 5	.....	390,000	178,000	287,000
March 12	113,000	388,000	470,000	225,000
March 19	67,000	220,000	360,000	667,000
March 26	.....	454,000	439,000	536,000
First quarter	1,916,000	4,403,000	4,698,000	4,827,000
April 2	.....	487,000	197,000	242,000
April 9	435,000	192,000	176,000	172,000
April 16	160,000	196,000	195,000	355,000
April 23	211,000	496,000	393,000	408,000
April 30	.....	295,000	372,000	362,000
May 7	43,000	212,000	263,000	374,000
May 14	117,000	544,000	455,000	537,000
May 21	232,000	306,000	387,000	414,000
May 28	283,000	142,000	180,000	312,000
June 4	222,000	438,000	274,000	161,000
June 11	225,000	179,000	368,000	387,000
June 18	.....	173,000	445,000	595,000
June 25	315,000	148,000	386,000	381,000
Second quarter	2,244,000	3,808,000	4,091,000	4,700,000

Tariff Talk Caused 16 Per Cent Jump in Imports in First Half of the Year

By C. E. KERN
New York Bureau, The Oil and Gas Journal

Stimulated by a temporary speeding up in shipping schedules to fill as much domestic storage as possible prior to the new import duties on foreign crude and refined petroleum products, imports of crude oil, gasoline and gas and fuel oils during the first six months of 1932 aggregated 49,639,000 bbls., a gain of 16 per cent over imports during the first half of 1931, and more than 1,000,000 bbls. in excess of imports during the first six months of 1930. Imports of crude were almost 5,000,000 bbls. ahead of 1931 figures, while gas and fuel oil imports increased more than 1,900,000 bbls. and gasoline imports were up 660,000 bbls.

Imports for the first half, by products, were as follows:

	First six months—	
	1932 (bbls.)	1931 (bbls.)
Gasoline	7,365,000	6,705,000
Crude petroleum	29,792,000	24,902,000
Gas and fuel oil	12,482,000	10,559,000

In the above table, 1930 figures are not fully comparative as imports, by products, were not separated until March, 1930, in the weekly returns.

Major importing companies went through the greater part of the first quarter with shipments held down to curtailed levels, in conformity with their general plan for limitation of imports for the protection of domestic markets. When it became obvious in the second quarter that some form of import tariff was inevitable, the curtailment movement went by the board and it became a race to move their holdings within this country in advance of the duties. Additional tankers were placed in the South American runs, and producing companies, notably in Venezuela, not only increased their production but drew substantially against storage holdings to keep their tanker fleets moving to capacity.

While the tariff has not been effective long enough for its full effects to be reflected, it is evident that import movement of gasoline is practically at an end, so far as regular shipments are concerned, with the exception of Rumanian gasoline, which has been coming in for some months to a Detroit independent on a contract which, it is understood, will permit this importer to continue shipments, despite the import duty of 2½ cents. The major companies affected were all in position to stop imports, and fill their requirements with domestic gasoline from their own production, or that of subsidiaries.

Crude oil, with a tariff of but 21 cents per barrel, continues to come in, and it is expected that certain quantities, notably of the so-called "specialty crudes," will continue to be imported. The same is true in limited measure of fuel oil, which can be imported, duty free, for delivery to vessels under American registry in certain specified instances.

Perhaps the most important change in

(Continued on Page 16)

They Laughed at David Moffitt's First Refinery but the Final and Best Chuckle Was His

By THOMAS F. SMILEY

Among the earliest recollections of David William Moffitt, vice president of the Mid-Continent Petroleum Corp., are the prairie schooners which creaked in dust-clouded caravan through the frontier settlement in Stark County, Illinois, where has was born in 1862. Here, where the old state road crossed Jack Creek, his father, who had come from County Antrim, Ireland, conducted a blacksmith shop, and here young Dave used curiously to eye the stream of pioneer home-seekers moving ceaselessly westward or watch in boyish excitement the furious operation of shoeing. a mean-tempered broncho.

Something of the hard, untamed, but self-sufficient character of the time and place is indicated by an occurrence in the Moffitt blacksmith shop. A vicious horse, fighting efforts to shoe it, struck out with a hoof and hit the smith on the lower jaw, knocking out all the lower teeth and leaving them hanging by shreds of flesh. Here was immediate and urgent need for a surgeon, a dentist, a doctor or at least a first-aid kit. But there were no such things in that region. Oh, well, there was the knife used in paring hoofs, and it was fairly sharp. Handling this clumsy implement as carefully as could be with fingers accustomed to rough, outdoor work, the owner of the horse removed the blacksmith's dangling teeth, trimmed off the torn gums and agreed that he had done a pretty good job. And that was that.

David, the youngest of six children, was 3 years old when his mother died, and he was 17 when his father followed her. He worked on farms for a year or two and then became a telegraph operator and railroad station agent. He quit railroad service in 1886 in Lenox, Iowa, and went to Dodge City, Kans., where he engaged in real estate business with W. J. Fitzgerald, afterward secretary of state.

Not Polished Maybe, But Fine Fellows

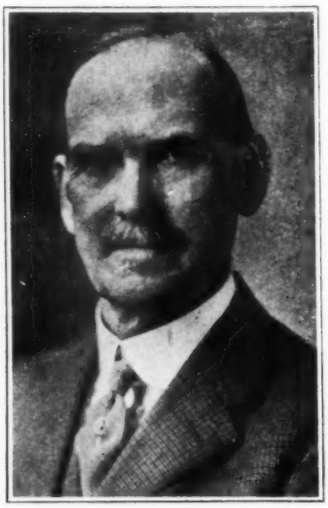
David Moffitt always was fond of running, jumping, wrestling, boxing and similar sports and thus it came about that he was welcomed by a group of men in Dodge City usually referred to as "the gang." The gang was composed largely of men who had been cow-punchers in that country before it was opened to settlement. They were rough, fearless, hard-riding fellows, quick on the trigger, given to liquor and cards, but as a rule neither brawlers nor bullies.

"At heart they were fine fellows," says Mr. Moffitt, "men you would be glad to have with you in a fuss. Among them was Bill Tilghman, later a deputy United States marshal, who while serving as a peace officer in Cromwell, Okla., a few years ago was shot and killed by a man resisting arrest. Though he was known as a 'bad man,' Bill Tilghman had qualities of a gentleman. He was cool-headed, unflinching in time of danger, loyal as a friend, held the respect of his associates and more than once I was glad to have him in my corner when trouble threatened."

The companionships which grew up between young Moffitt and these picturesque Kansas plainsmen of the turbulent eighties through his interest in athletic sports in which they too delighted, was the direct cause of Mr. Moffitt's election to public office. Local Republican politicians figured that the regard in which he was held by an element usually considered antagonistic to law and order could be turned to account in strengthening their ticket, so they had him nominated for probate judge of Ford County. He was elected and at the expiration of his term he was re-elected to succeed himself. While serving his second term he became agent for the Rock Island Railway in Dodge City, holding this position and his county office at the same time.

You're Never Licked Unless You Admit It

Dogged refusal to accept defeat, a characteristic inherited from a line of Scotch-Irish ancestors and intensified by the rigors of poverty, lifted David W. Moffitt from day labor on Kansas farms to a high place in the oil refining industry. The privation of his boyhood was not of the half imagined kind recently described by Bishop Edwin H. Hughes in Chicago as "not so much a matter of keeping the wolf from the home as keeping the wolf from the garage."



DAVID W. MOFFITT

The want that harassed and cramped Mr. Moffitt's boyhood was extremely real. It was hard, necessitous, grinding. The tired mother died when the boy was three years old. He was one of six children. The father, caught in an unequal struggle with adversity, did his best to keep his family together and to build real men and women from the motherless brood. The oldest girl was nine. Through years of hardship she bravely added the role of mother to that of sister.

With the death of the father the family scattered. Young David wasted no time on self-pity or forebodings. Where a less resourceful and resolute person would have seen only danger and failure he saw opportunity.

When the job he wanted was not obtainable he took what he could get, and liked it.

When a banker refused to lend him needed money he announced, "All right, we'll make it." And he did.

When a timorous board of directors balked at signing a contract to take 300 bbls. of crude oil daily, declaring their makeshift refinery could not handle that much, he signed the contract without the board's knowledge and fulfilled it to the letter.

Any one of innumerable difficulties would have chained him to the foot of the ladder if he had admitted to himself the possibility of failure. But once convinced of the soundness of a program he previsioned success. Then he won it. That was his life formula.

When the Cherokee Strip in Oklahoma Territory was opened up for settlement, September 16, 1893, southwestern Kansas had suffered from such a succession of drouths that much of the land was not producing enough to pay the taxes on it. Mr. Moffitt, discouraged by business conditions, decided to join the thousands who planned to make the run into the Strip. How it came about that he witnessed the run while perched on the roof of a railroad station provides one of the bizarre incidents of that historic day.

Had a Bright Idea

R. R. Hudson had built a railroad from Dodge City to Montezuma, Kans., 35 miles southwest. He operated the line for a little while and then abandoned it when drouths destroyed possibility of profit. Among relics left from his venture he had several handcars. Mr. Moffitt knew the Rock Island planned to send a train into the Strip on the day of the run. This train, made up of 55 stock cars, with two locomotives, was to start from the southern boundary of the Strip, 4 miles north of Hennessey. Mr. Moffitt had a bright idea at this juncture and he unfolded it to Mr. Hudson, who he knew intended to ride into the Strip on this train and take a claim near Enid.

This was the b. i.: A party of four, including Mr. Hudson and Mr. Moffitt, was to be organized; one of Mr. Hudson's leftover handcars was to be placed on an improvised frame fastened to two pairs of wagon wheels and covered with canvas to hide it from curious eyes; this device, drawn by horses, was to be driven up alongside the head locomotive of the Rock Island train, ready to start when the signal for the race into the Strip should be given. It was obvious that a team of horses easily could out-distance a starting train for at least a few hundred yards. Then before the train could gain momentum the handcar was to be transferred swiftly to the rails ahead of the engine. It was believed that four men on a handcar could outrun the train to Enid, but even if they couldn't the engineer would not dare to run them down.

The plan was received with enthusiasm and arrangements were made to put it into effect. But before September 16 arrived the Rock Island superintendent prevailed upon Mr. Moffitt to consent to a transfer from Dodge City to Enid as agent at the latter point, so the originator of the crafty stratagem did not himself participate in its execution.

On the day of the opening the train, with steam up, stood ready for the word to go. The conductors collected more than 6,000 fares. How many they missed never will be known, for not only was each of the stock cars jammed to suffocation, but men swarmed over them like flies, covering the tops, clinging to the sides, hanging on wherever they could find space for a hand and a toe.

Ready for the Signal

Tense thousands waited poised for the signal to go.

A gun cracked.

"Giddap!" yelled the driver, and the savage swish of a whip sent the two Hudson horses galloping ahead, with the canvas-covered mystery rattling, bouncing and plunging crazily at their heels. The team was brought to a quick stop a few hundred yards ahead of the train. The four conspirators nimbly shifted the hand car to the rails and in a moment were flying triumphantly in advance of the puffing locomoative.

Mr. Moffitt, who had gone to Enid by train two days earlier, climbed to the roof of the station there and from this vantage point cheered as Mr. Hudson and his companions pumped their handcar into the village well in advance of the 6,000 men on the train. He saw his friends leap from the handcar and take choice claims close to what is now North Enid, and he wondered if he had not made a blunder in remaining with the railroad.

The triumph of the four who had sailed into the Strip on a handcar was brief. Other men who wanted those claims and who were wrathful over the way they had been outwitted, filed contests. The Department of the Interior upheld the contestants and declared the claims forfeited on the ground that Mr. Hudson and his three fellows had obtained their land by resort to trespass on the railroad property. To this day Mr. Moffitt expresses the view that the decision was illogical and without legal basis.

The ensuing 18 months witnessed bitter warfare between the citizens of South Enid, who demanded railroad service, and the Rock Island, which refused to give it. No trains were stopped at South Enid and there was no station there. Enid and South Enid became military camps, with pickets on duty constantly. Bridges were burned, trains wrecked and other forms of vandalism practiced until the railroad capitulated and granted the service demanded.

Had a Future, But Not Much Else

After handling the railway business of the two Enids through the North Enid station until peace was accomplished, Mr. Moffitt was transferred from one point to another until 1907, when he left the railroad service for good in Wichita, Kans. He was employed for a short time by the Wichita Chamber of Commerce, and in 1908 he cast his lot with the Kansas Oil Refining Co. Here, with this struggling concern, which had an unimpressive past and a highly unpromising future, he began a career in the oil industry in which careful planning, cease-

You hide your light under a bushel when you sell Dubbs cracked gasoline as just gasoline

Let your light shine out

Talk about Dubbs cracked gasoline, advertise it, holler about it

Tell the trade it's good because it's Dubbs cracked gasoline—your own brand of Dubbs cracked gasoline

Then you cash in twofold on your Dubbs license contract and your own reputation

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

less study and unfailing performance of obligations assumed, along with pluck, ingenuity and determination, were to carry him to high place in one of the major companies.

Ira F. Elliott was president and Mr. Moffitt manager of the Kansas Oil Refining Co. as it was constituted with Mr. Moffitt's addition to its personnel. These two comprised the entire directing force. There was an unobtrusive board of directors. The company's refining plant, in Chanute, Kans., could have been transported on a flat car and a few wheelbarrows. It had difficulty at first in procuring crude oil fit for refining purposes, the 28 gravity Chanute being the best obtainable until the Bartlesville Field, yielding 32 gravity oil, was opened. Adding to the discouraging conditions was the fact that the country was emerging from a depression which had demoralized business.

The little organization managed to keep going, made some headway and acquired many friends. After the Nowata Field, with its 36-38 gravity crude, was opened in 1909 the Kansas Oil Refining Co. received a proposition from J. R. Greenlees, an operator in that area, that the company move its plant to Coffeyville, Kans., and contract to take 300 bbls. of crude from him daily. Mr. Greenlees was to build a pipe line from his wells in the Nowata Field to Coffeyville. It was a further part of the plan that a line of retail stations should be established in Montana, for which enterprise the Kansas Oil Refining Co. was to provide $50,000 and the Mutual Oil Co., organized as a marketing agency, the rest of whatever money might be needed. The board of directors authorized Mr. Moffitt and Mr. Elliott to go ahead with the proposed deal, with the understanding that the directors should not be asked to put up any money.

Lent Money on Assets, Not Prospects

A survey of their cash and credit revealed to Mr. Moffitt and his associate that $5,500 was the limit of their resources for dismantling their refinery in Chanute, obtaining a site in Coffeyville, moving the plant to that town and rebuilding there. So they called on John T. Wettack, president of the First National Bank of Coffeyville, laid their plans before him, pointed out how Coffeyville's prestige would be enhanced by acquiring their refinery and then offered him the privilege of extending to them a line of credit.

The First National was one of two banks in Coffeyville which had been visited some 20 years previously by the notorious Dalton gang, when four outlaws and four citizens were slain. Maybe Mr. Wettack's mind reverted to that historic raid on the bank. Anyway he waited till his two callers had finished their glowing story and then spoke with succinctness and finality:

"My friends, we lend money on assets, not on prospects."

Bang went a magnificent collection of glittering hopes!

"Very well, Mr. Wettack," responded Mr. Moffitt, crestfallen but with plenty of fight left in him, "instead of borrowing the money we'll make it."

And they did that very thing. In the face of sage warnings, with a lofty scorn for precedents and in violation of all rules made and provided for guidance in such ill-omened situations, the two young men forthwith launched a program which for sheer audacity makes "starting on a shoestring" look like elephantine caution.

Five 80-bbl. field tanks provided a battery of continuous stills in the Kansas Oil Refining Co.'s plant in Coffeyville when it began operations under its contract with Mr. Greenlees. Five 250-bbl. wooden flow tanks served as condenser boxes. The rest of the marvelously devised refinery was on the same order. When Mr. Moffitt and Mr. Elliott presented to their board of directors a blank contract which would bind the company to take 300 bbls. of crude daily from Mr. Greenlees that dumfounded body refused to sign it, declaring it would be impossible to handle that quantity of oil with the strange outfit dignified with the name of refinery.

So He Signed It Himself

Convinced that their future depended upon the contract being signed and fulfilled, Mr. Moffitt executed it without the knowledge of the directors. The maligned plant refined the full quota of crude the first day and steadily increased the output until 1,800 bbls. was being handled daily.

In one year and a half the two refiners astounded themselves as well as the directors by cleaning up $189,000 net profit. And every agreement made in behalf of the queerly constituted company had been lived up to religiously. Another thing—and there was peculiar satisfaction in it—the two men who had been unable to borrow "on prospects" needed some credit later and they got it without listing of assets or statement of business condition from the same men who previously had refused it, John T. Wettack, president of the First National Bank of Coffeyville, and his son, Frank S. Wettack.

About 1912 Mr. Greenlees, acting for himself and for the Kansas Oil Refining Co., sold his production in the Nowata Field, the pipe line to Coffeyville and the refinery, which had been enlarged and modernized, to an English syndicate. Mr. Moffitt was retained as manager by the syndicate and he continued in this position till 1915. In that year Joshua S. Cosden, who was developing a modern refinery in West Tulsa, Okla., asked Mr. Moffitt to become his assistant in running the refinery and the pipe line operated in conjunction with it. Mr. Moffitt accepted the proposition. Cosden & Co. became one of the largest refiners and producers of oil in Oklahoma. In 1923 the name of the company was changed to Mid-Continent Petroleum Corp.

Mr. Moffitt remained with the organization and became vice president, which office he still holds. Throughout his career in the oil industry Mr. Moffitt has been keenly interested in the benefits obtained through association activity, and he has taken a leading part in the work of the Western Petroleum Refiners Association, of which he was a charter member. He served as its president several years. He is a Presbyterian elder, a former president of the Brotherhood Bible Class of the First Presbyterian Church, Tulsa, and for years has been active in civic and business organizations. He and Mrs. Moffitt reside in Tulsa, which is also the home of a daughter, Mrs. W. C. Henneberry. A son, David C. Moffitt, resides in Rich Hill, Mo.

Advertising Shows Changes in the Quality of Products

(Continued from Page 12)

go hand in hand. That's the reason for the new Skelly Color Plan which guarantees you get what you pay for."

Turns White

"Super-Sparco Washes Up" is the announcement of the Spartan Refining Co., Inc., in announcing that its regular grade of gasoline in the future would be white instead of blu-green. "Blu-green was once an indication of the quick-starting, antiknock and long-mileage qualities in Super-Sparco gasoline. But with the current epidemic of third-quality gasoline colored blue and green, Blu-Green has lost its significance and Sparco will hereafter leave it out."

Several companies have changed their color schemes in gasolines, third grades formerly colored blue being changed to white in order to meet the competition of companies selling only one grade at a third-grade price.

Octane Rating

The Associated Oil Co. of California is one of the few distributors to use the word octane in its advertising. The company is now introducing a "Flying Aero Type Gasoline" with "road-proven octane stability—for aeroplane performance in your car."

In regard to the antiknock performance of its gasoline the company makes the following statement which is of interest in view of the wide discussion among technologists regarding present methods of testing.

"Octane Stability—'Octane numbers' are based on laboratory ratings. In actual road performance they fail to indicate antiknock efficiency. Gasolines with so-called 'high octane' numbers but without octane stability are rejected for aviation service because they knock under severe operating conditions. Associated 'Flying A' has identically the same octane stability required in aviation gasoline. It's road-proven octane stability that counts."

Economy

Many companies are featuring economy in advertising both their motor fuels and oils. The Mid-Continent Petroleum Corp. in a series of advertising stresses the extra miles of its gasolines. "In gasoline, it's the miles per gallon—not the cost per gallon that counts," the company point out. "Diamond is a mileage gasoline. There are extra miles in every gallon."

The Standard Oil Co. of New York, Inc., another marketing subisidiary of the Socony-Vacuum Co., also caters to the trend toward economy in all consumer purchases in its advertising, which states: "These days when pennies must do double duty, more motorists buy Socony that any other brand in New York and New England."

The Sinclair Refining Co. is in the midst of one of the largest advertising programs of any of the major companies. Recently it has featured the fact that the company was awarded a contract by the U. S. Navy for 1,600,000 gallons of Sinclair products to be used by battleships, destroyers, submarines, navy aircraft and army tanks.

Tariff Talk Caused 16 Per Cent Jump in Imports First Half

(Continued from Page 13)

the importing picture has been the deal whereby Pan American Petroleum & Transport Co. (Standard Oil Co. of Indiana) sold its foreign properties to the Standard Oil Co. of New Jersey, which has become the leading producer in South America as a result of the deal, and thus is placed in position where the effects of the import duties on its business are minimized, since it can now handle export business from its Venezuelan and other South American production, and confine its domestic marketing operations largely to crude produced and refined in the United States.

Shell, hitherto a major importer, has likewise revised its operating procedure, much along the same lines.

Gulf Oil, the other major American producer in South America, as yet lacks refining facilities in the Caribbean area.

Home Market Effects

The effect of the sharp cut in imports, notably on gasoline, has been to strengthen the statistical position of the domestic market for crude and products, and with the major companies said to be committed to a policy of partial limitation of withdrawals from storage during the summer months, to permit of the absorption of larger quantities of domestic crude, the price structures on domestic oils have benefited correspondingly.

With major companies largely filling export orders from their Caribbean refineries, in place of shipments out of the U. S. Gulf, it is evident that the benefits accruing to the domestic industry from the tariff will not be as great as its proponents had hoped, although the home industry will undoubtedly benefit in some measure, temporarily at least.

New Refineries?

Another result of the American import tariff on oil is expected to develop later in new refinery construction in the Caribbean area, to permit of the processing of Venezuelan and other South American production close to the producing areas, and export marketing of the refined products.

Rumanian Gasoline

The major surprise in the import field this year has been the gasoline imported from Rumania but it is considered likely that upon the expiration of contracts, Rumanian shipments to the United States will be discontinued.

The steady upward trend in import totals this year is illustrated by the following table showing weekly imports of gasoline, crude petroleum and gas and fuel oils during the first half of 1932, with comparative data for the previous two years:

IMPORTS OF PETROLEUM AT PRINCIPAL U. S. PORTS FOR FIRST SIX MONTHS OF 1932, 1931 AND 1930

Gasoline (Bbls.)

Week ended—	1932	1931	1930
January 2	144,000	272,000	.....
January 9	435,000	194,000	.....
January 16	294,000	333,000	.....
January 23	162,000	369,000	.....
January 30	206,000	106,000	.....
February 6	173,000	282,000	.....
February 13	373,000	245,000	.....
February 20	68,000	159,000	.....
February 27	480,000	366,000	.....
March 5	.....	371,000	.....
March 12	165,000	319,000	.....
March 19	481,000	311,000	32,000
March 26	135,000	242,000	401,000
April 2	662,000	345,000	526,000
April 9	484,000	341,000	177,000
April 16	150,000	256,000	179,000
April 23	527,000	243,000	193,000
April 30	119,000	278,000	275,000
May 7	40,000	260,000	541,000
May 14	301,000	65,000	323,000
May 21	311,000	328,000	430,000
May 28	414,000	300,000	246,000
June 4	223,000	214,000	249,000
June 11	319,000	495,000	826,000
June 18	329,000	61,000	115,000
June 25	268,000	40,000	300,000

Crude (Bbls.)

Week ended—	1932	1931	1930
January 2	894,000	1,189,000	*1,491,000
January 9	527,000	1,382,000	*1,868,000
January 16	538,000	666,000	*1,980,000
January 23	923,000	1,292,000	*2,193,000
January 30	959,000	939,000	*1,446,000
February 6	730,000	1,406,000	*1,378,000
February 13	683,000	1,086,000	*1,788,000
February 20	1,059,000	819,000	*2,294,000
February 27	828,000	1,149,000	*2,001,000
March 5	1,093,000	885,000	*1,816,000
March 12	1,072,000	897,000	*1,988,000
March 19	712,000	1,026,000	824,000
March 26	1,006,000	609,000	1,229,000
April 2	2,705,000	1,274,000	1,409,000
April 9	1,240,000	712,000	978,000
April 16	1,240,000	974,000	1,157,000
April 23	2,062,000	468,000	1,402,000
April 30	1,042,000	1,097,000	1,284,000
May 7	1,428,000	775,000	1,167,000
May 14	1,032,000	1,108,000	1,619,000
May 21	1,262,000	729,000	1,151,000
May 28	958,000	1,146,000	1,139,000
June 4	1,407,000	542,000	1,532,000
June 11	1,618,000	1,259,000	680,000
June 18	1,130,000	667,000	1,312,000
June 25	1,640,000	806,000	1,262,000

Gas and Fuel (Bbls.)

Week ended—	1932	1931	1930
January 2	631,000	507,000	.....
January 9	307,000	315,000	.....
January 16	502,000	720,000	.....
January 23	457,000	351,000	.....
January 30	450,000	392,000	.....
February 6	273,000	638,000	.....
February 13	288,000	116,000	.....
February 20	654,000	427,000	.....
February 27	578,000	564,000	.....
March 5	504,000	348,000	.....
March 12	599,000	378,000	.....
March 19	428,000	677,000	415,000
March 26	625,000	479,000	261,000
April 2	764,000	670,000	305,000
April 9	618,000	324,000	237,000
April 16	372,000	356,000	429,000
April 23	682,000	552,000	313,000
April 30	474,000	410,000	391,000
May 7	156,000	342,000	223,000
May 14	717,000	184,000	311,000
May 21	139,000	340,000	649,000
May 28	368,000	282,000	348,000
June 4	417,000	169,000	284,000
June 11	473,000	398,000	529,000
June 18	692,000	383,000	602,000
June 25	314,000	237,000	63,000

*All products. Import totals, by products, were not reported in detail until March, 1930.

Gulf's Position

Considerable interest in import circles centers on the position of Gulf Oil Corp. Under the terms of the modified Barco concession, Gulf is now undertaking the development of an important oil area in Colombia, and within the next few years is expected to develop considerable production in that country.

With South American crude handicapped in United States markets by the import duties, it is believed in oil circles here that Gulf, like Jersey and Royal Dutch-Shell, will be forced to develop or acquire refining facilities somewhere in the Caribbean area to protect its South American holdings.

Consolidated Oil Corp. (Sinclair), The Texas Corporation and several other American companies will be confronted with the same dilemna as soon as their South American development plans are carried to completion.

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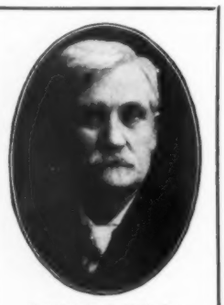

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Let Nature Do It

Back in Bradford they are resorting to an artificial water drive to increase the recovery of oil. In East Texas there is a natural water drive that should be used for the same purpose.

In the Pennsylvania Field they flood the sand through intake wells to move the oil. In the Texas Field the water is already there waiting to be scientifically employed.

Water in an oil field, it has been said, is like fire; it must be kept within bounds if disaster is to be avoided.

Most of the talk about water in the East Texas district has been as a menace, but, properly controlled, it can be an efficient and valuable aid in production.

The reservoir energy in East Texas is the hydrostatic pressure of the water which enters the Woodbine sand between Fort Worth and Dallas. Moving eastward under high pressure and at high temperature it drives the oil through the sand when the stratum is tapped by a well. As the oil is withdrawn the water fills the voids in the porous formation left by the escaping oil.

If the rate of withdrawal of oil from the sand is faster than the water can fill the voids pressures at the bottom of wells show a decline. These voids in the sand constitute a danger of the water, under higher pressure than exists in the voids, moving through the sand, trapping large quantities of oil which can never be recovered.

The effectiveness of the water movement depends upon the rate of pressure behind the oil. Any diminution of that pressure due to faulty production methods lessens the propulsive energy of the water in extracting the oil from the sand.

The effects of improper production operations were seen in contrasting the decline of pressure in the period of heavy withdrawals in East Texas before the military shutdown a year ago and the subsequent building up of pressure during that shutdown.

The decline in bottom hole pressures indicated a much less ultimate recovery than had been calculated with the original higher pressure. Engineers count on about double the recovery with an efficient water drive.

It has been noted that in fields where there was no effective water drive, although other conditions were very similar, the ultimate recovery of oil by natural flow and by pumping has been disappointing and much less than had reasonably been calculated from known thickness, porosity and saturation of the sand. By contrast there have been actual per acre recoveries of 35,000 to 40,000 barrels from other Woodbine sands fields where there was an effective water drive.

Abnormal withdrawals, besides creating local water hazards bypassing oil, reduce the subsurface pressures and lessen the reservoir energy for the expulsion of oil from the sands.

Theory and demonstration have met. The advantages of pressure control have been proved as clearly as the disadvantages from lack of it.

Here, then, is something definite to go upon in carrying out the provisions of the Texas conservation law which prohibits waste through drowning with water, the premature intrusion of water through improper drilling or production practices, or the inequitable distribution of gas energy, water drive, or other natural forces resulting in inequitable withdrawals from the common source.

Engineering knowledge and skill can provide regulations which will keep the bottom hole pressures uniform. If the bottom hole pressure declines too rapidly they know that too much oil is being withdrawn, just as the pressure fell in the period of wholesale withdrawals before the shutdown last August.

That period of unrestricted production set up many local areas of relatively higher and lower pressures adjacent to each other. The effect was that there was drainage from the areas of high pressure to the areas of lower pressure.

Instead of being uniform, bottom hole pressures varied in a waving line with a tendency to cut off and trap oil that would be lost.

Plainly the remedy required is a system by which this waving line of varied pressures, areas of higher and lower pressures, will be eliminated and a bottom hole pressure that will be uniform substituted.

By this means the water would advance as the oil was withdrawn, maintaining the most effective propulsive pressure. A decline in bottom hole pressure beyond normal would indicate at once that the rate of withdrawal was too great and the danger could be corrected.

This would be a scientific substitute for the existing method of fixing East Texas allowable production. It would afford a measure for conservation and a protection against wasteful and destructive methods.

Beyond that it would immensely increase the ultimate recovery from the field. It would utilize to the fullest the natural energy, conserving costs of production. It would insure the maximum of recovery with the minimum of expenditure and would protect the industry against overproduction.

As it has been, the allowable production in East Texas has been revised semimonthly with a view to keeping the output within a conservative limit. Helpful as this has been it has lacked the scientific efficiency that could be secured by the adoption of a rule for the maintenance of uniform bottom hole pressures.

Sufficient data are now available on conditions in the East Texas field to establish beyond question that bottom hole pressures constitute the most accurate and dependable record of what is taking place in the producing horizon and that this record should be the basis for calculating the allowable production in the field.

The suggestion is so practical that the commission could not do better than appoint an engineering committee to secure bottom hole pressure readings for use in a through study of the field with a view to the adoption of the plan proposed.

An engineering survey could furnish the basis for such a regulation by the Railroad Commission that would give that body a definite guide for future revisions.

It would place the curtailment policy on an unassailable foundation as a measure of conservation, fulfilling the exact requirements of the state law. It would offer the industry an example of applied engineering knowledge that would rank with introduction of the air-gas lift in avoiding the loss of recovering only a fraction of our oil.

The country would be benefited by greater recovery; the industry by prevention of wasteful and costly operations and untimely production, and every owner would be benefited by less expensive methods and larger ultimate yield.

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Better Demand for Furnace Oils and Kerosene Brings Higher Prices in Group 3 Market

By C. O. WILLSON

In response to an improved domestic demand, Oklahoma (Group 3) prices on kerosene, distillate and natural gasoline advanced fractionally during the past week. The advances amounted to one-eighth cent per gallon in most grades of these products.

Refinery gasolines were holding their own. The position of this product changes almost from day to day. Slow buying for a brief period results in a few price concessions from sellers and it appeared last week that the market generally might slump to lower levels. Buying improved the latter part of the week and prices firmed and continued unchanged the first two days of this week. This market is termed "thin" so far as spot sales are concerned. By that is meant there are few spot sellers or buyers. The great bulk of the gasoline movement in Oklahoma and other Mid-Continent areas is covered by contracts or through shipments to regular customers, which in effect are on the same basis as the long-time agreements. There are so few sellers and buyers who purchase on an open market basis that it often stagnates to the point where those not familiar with conditions are of the opinion that the movement has stopped causing alarm among some of the trade.

This situation again supports the contention of many market students who from time to time have pointed out the desirability of refiners not attempting to sell all their gasoline output on a contract basis so that they could contribute to an active spot market which would prevent the dull periods so disastrous to spot quotations. These spot quotations as published in the trade publications are the basis for the contracts, so that the sellers are dependent on the open market in the price received for their gasoline output.

Refined Market Barometer

Refinery gasoline prices were either steady or advancing according to reports from the several refining areas during the past week. Most of the eastern refiners advanced their quotations on all the domestic grades. The same reports showed that gasoline consumption was at the peak point of the year with heavy sales assured over the next few weeks. Furnace oils and kerosene strengthened in the Middle West and Mid-Continent and the products were reported strong at all interior points. Fuels were generally steady with no change in gas oils. Natural gasolines advanced in the Mid-Continent with lower quotations in California. Some grades of cylinder stocks reduced at eastern refineries where wax prices also are lower.

Mid-Continent—Most important development of week was the strength shown by furnace oils for which there is a strong demand. Kerosene prices also stronger. Refinery gasolines holding their own and natural gasolines stronger. No changes in gas oil and fuel oil.

East Coast—Refinery gasolines advance. Routine movement of kerosene and fuel oils. Cylinder stock prices reduced following slow demand. Prices on some grades of wax lower. Export movement continues slow.

Pennsylvania—Refinery gasoline quotations higher. Good demand for kerosene. No important price changes in lubricating oil list. Wax demand slow.

Gulf Coast—Prices being maintained on all the principal products although there is little spot business. Fuel oil most active product.

Chicago—Better tone to gasoline market with less distress material offered. Better demand for furnace oils and kerosene and many sellers have advanced quotations. No change in fuels and gas oil.

California—Heavy gasoline demand and record consumption anticipated for next three weeks due to Olympic Games. Gasoline prices steady. Better demand for fuel oils.

Furnace Oil Demand

Many have been surprised due to the strength shown by furnace oils over the past month. This is the period of the year when ordinarily spot distillate prices are at the low point of the year and buyers can secure attractive offers from sellers both for immediate shipment and delivery over long periods. This year after a slow period following the close of the burning season in May, inquiries started to come in from Middle West jobbers and over the past two weeks some sizeable business has been placed by buyers who have become convinced that prices will not go lower.

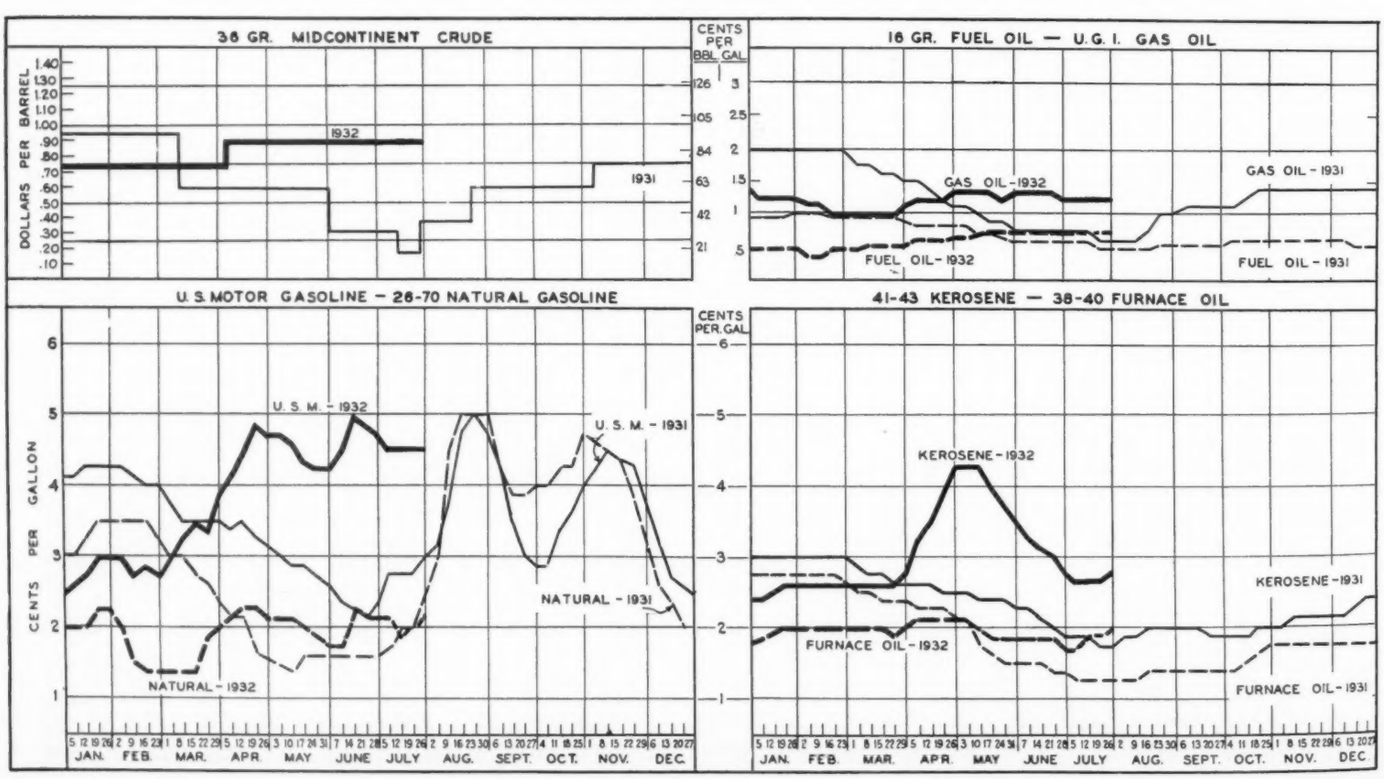
Relatively little of this business went to Oklahoma refiners for the reason that the sellers in that State so far have had little material to offer. The orders, however, were placed with other Mid-Continent and Middle West refiners and were largely responsible for the advances of the past week in the Oklahoma (Group 3) market.

Installations Increasing

In regard to furnace oils, many have assumed that the consumption of furnace oils is on the decrease due to business conditions. Available figures on the production of the several types of oil burners do not support this view. Reports based on government data show that during 1931, 297,861 burners were manufactured, of which 103,997 were of the automatic domestic type, 2,300 commercial burners, 148,212 range oil burners and 43,354 oil-burning space heaters.

According to the Fuel Oil Journal, the 1931 production brought the total number of domestic burners operating in this country to 773,400, with 44,300 commercial burners, 44,300 range burners and 100,000 space heaters. No accurate figures are available as to the oil consumption of these burners. Reports of oil companies show that some domestic and commercial type burners were not used during the past winter due to the necessity of utilizing some cheaper type of fuel, but the large number of new installations indicates that the total consumption is increasing despite the number not being operated.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1932
1931
CENTS PER BBL
CENTS PER GAL
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1932
GAS OIL - 1931
FUEL OIL - 1932
FUEL OIL - 1931
U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1932
U.S.M. - 1931
NATURAL - 1931
NATURAL - 1932
41-43 KEROSENE — 38-40 FURNACE OIL
KEROSENE - 1932
KEROSENE - 1931
FURNACE OIL - 1932
FURNACE OIL - 1931
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

The Middle West states along with the Pacific Northwest, Middle Atlantic and New England states are the largest users of oil burners. Chicago, St. Paul, Minneapolis, Detroit and St. Louis are the large consuming centers of the Middle West, although some of the smaller cities have a greater number of installations in relation to population. The burner manufacturers have improved their equipment and have also materially lowered their prices and it is said that new sales over the past weeks for the coming season have been greater than expected by the manufacturers. This statement is substantiated by inquiries from furnace oil jobbers and refinery distributors. Practically all of these distributors are seeking at least as much furnace oil as they purchased last season.

Another popular fallacy is that natural gas is replacing furnace oil as fuel for domestic burners. In Kansas City and some other points where natural gas rates to domestic users have been reduced, some of the furnace oil burners are being replaced with natural gas. However, Kansas City is still a large consumer of furnace oils and new installations are constantly being made, with the sellers claiming, that all factors considered, the furnace oil is a more attractive fuel for homes and small buildings than natural gas.

In other large cities of the Middle West natural gas is more competitive with heavy oils than it is with furnace oils. Most of the large natural gas distributors, in order to build up volume, have made low rates to industrial plants and other large consumers. Rates as low as 8 cents per 1,000 cubic feet have been made in the Southwest and 15 cents in the Middle West. These rates require a delivered price of $1 per barrel or less on fuel oil. On this basis, natural gas has taken a large volume of industrial business from refiners selling low gravity fuels.

In their sales to domestic users, including small buildings, the natural gas distributors, except for the Southwest, have usually maintained rates on natural gas ranging from 75 cents to $2 per 1,000 cubic feet. Some of this gas is mixed with artificial gas and has a low B.t.u. content. It is not difficult for furnace oils to compete with natural gas in these cities. Several of the larger Middle West cities do not have natural gas available at this time.

One of the largest oil burner manufacturers has stated that natural gas distributors will never be able to compete in cost or service with furnace oil in domestic heating except in those sections adjacent to the gas fields where the gas can be made available without the heavy investment required when gas trunk lines several hundred miles long are necessary.

The situation in regard to the supply of furnace oil from refineries for the coming season has been explained in these columns in recent issues. The supplies will be made available but at this time it appears that the sellers will not be interested in the business on the price basis of the past two years. They will wait until the market is in line with the crude oil price schedules and also in line with the value of the furnace oil cuts as stock for cracking operations.

Internal Revenue Department Answers Questions Regarding Federal Tax

By C. E. KERN

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 23.—Questions concerning the use of lubricating oil and gasoline in manufacturing processes have been answered by the Bureau of Internal Revenue as follows:

"Receipt is acknowledged of your letter of July 1 in reference to the provisions of Section 601 (c) (1) and Section 620 of the Revenue Act of 1932.

"You state that some manufacturers of articles such as automobiles, brewer's wort, matches, soft drinks, etc., are insisting that because these articles are taxable under Title 4 of the Revenue Act of 1932 the manufacturers thereof are entitled under Section 620 of the act to buy lubricating oil and gasoline used in the manufacturing processes, tax free.

"Section 620 of the Revenue Act of 1932 provides in part that:

"'Under regulations prescribed by the commissioner with the approval of the secretary, no tax under this title shall be imposed upon any article (other than a tire or inner tube, or an article taxable under Section 604, relating to the tax on furs) sold for use as material in the manufacture or production of, or for use as a component part of, an article to be manufactured or produced by the vendee which will be taxable under this title or sold free of tax by virtue of this section.'

"It will be noted that under the provisions of Section 620 an article may be sold tax free by virtue of that section, if such article is to be used as material in the manufacture of or as a component part of an article which will be subject to tax under Title 4 of the Revenue Act of 1932.

"As interpreted by this office, the language of Section 620 has reference to articles which become a tangible part of a finished product, as, for example, automobile parts and accessories which maintain their form and substances in the structure of the automobile.

"It is the view of this office that the provisions of Section 620 are not applicable to the sales of lubricating oil and gasoline which are expended or consumed in manufacturing processes and which do not become a component part of a finished product subject to the tax under Title 4 of the Revenue Act of 1932."

Another letter replied to today has application to certain petroleum products among others.

"Reference is made to your letter of June 15 in which you submit several questions upon which you desire a ruling," the answer of the Bureau of Internal Revenue states.

"In reply you are advised that if 'A' manufactures goods for 'B' and the patent trade mark, formula or recipe are owned by 'B' and 'B' takes the entire output of the goods manufactured, then 'B' is the manufacturer and liable for the tax.

"Where 'A,' a dealer or jobber, contracts with 'B' for the manufacture of a taxable article whereby 'A' furnishes 'B' all or a portion of the material to be used and pays 'B' for the labor plus a specified profit, 'A' is the manufacturer and liable for the tax.

Gasoline and Naphtha

Most of the open market trading centered in the low octane U. S. Motor grade. This product in Oklahoma continued to be quoted to the trade at a price range of 4½ to 5 cents. Resale material was available in Oklahoma at 4⅜ cents and North Texas material was occasionally offered during the week on a price basis of 4¼ cents Oklahoma.

The 57-65 octane U. S. Motor continued to be quoted by large refiners at three-eighths to one-half cent premium over the low octane. Very little trading was reported in the higher gravity grades of gasoline except in cases where the refiners were in a position to give a high octane rating with a low price. Naphtha prices were unchanged.

Natural Gasoline

The inland Texas market on all grades of natural gasoline moved up to the Oklahoma levels last week, due to a steady demand which resulted in several manufacturers being sold up for the balance of the month. The 26-70 grade was bringing 2⅛ cents in both Oklahoma and Texas the first of the week. Manufacturers reported sales of Grade 18-55 at 2½ cents.

There was little change in the special grades of low vapor pressure naturals. Reports from the consuming territory show that these grades are taking sales from the refinery grades due to the low prices. With the 11-pound material available at 3¾ cents and 9-pound at 4¼ cents, manufacturers are in a position to offer effective competition to refiners endeavoring to obtain a low of 4½ cents for their refinery gasoline. Many observers feel that no lasting improvement in refinery gasoline is possible until quotations on these low vapor pressure naturals are advanced to at least the U. S. Motor level.

Other Products

The situation in regard to furnace oils has already been explained. All grades of furnace oil and kerosene are one-eighth cent higher than last week. This makes a low of 2¾ cents for the 41-43 water white kerosene and 2 cents for 38-40 straw distillate. The distillates continue scarce at the new price levels.

Heavy fuels are unchanged. Gas oils not suitable for furnace oils are more freely available at quotations which have not changed in over a month. The open market supply for high cold test gas oils is largely among the Oklahoma City plants. One large purchaser of topped crude oil and gas oil from plants in that field has reduced its purchases. These gas oils are selling at a price range of 1¼ to 1⅛ cents.

Little complaint is heard from refiners regarding bright stocks, neutral oils or the finished motor oils. Prices are steady. Wax prices are unchanged with little new business reported.

Oklahoma refiners of wax are hoping that early fall will bring an improved demand both in export and domestic markets. The production is much below normal and stocks are said to be less than they were a year ago.

American Petroleum Institute Weekly Refinery Statistics

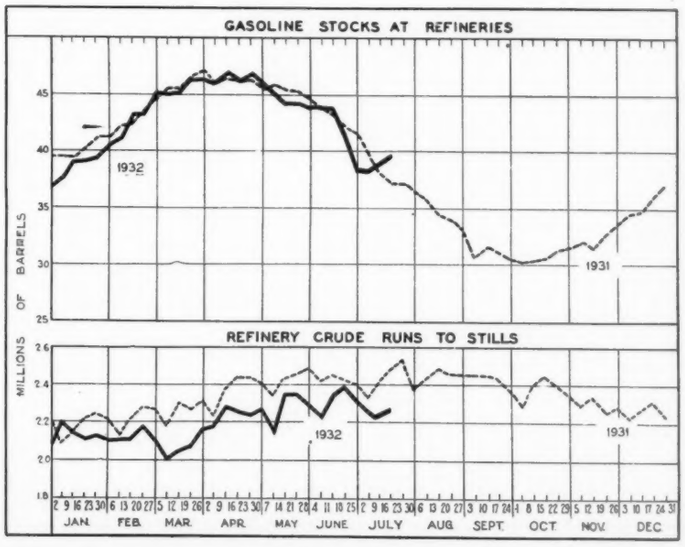
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks All figures in 42-gallon barrels.

Week Ending July 23, 1932, Compared to Week Ago

	Week ending July 23				Week ending July 16			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	457,700	6,003,000	7,677,000	100.0	453,700	6,268,000	7,702,000
Appalachian	91.8	93,900	1,825,000	1,121,000	91.8	102,200	1,489,000	1,188,000
Ind., Ill., Ky.	98.9	296,000	5,497,000	4,393,000	98.9	314,300	5,558,000	4,433,000
Okla., Kans., Mo.	89.6	231,700	3,488,000	3,467,000	89.6	230,700	3,354,000	3,454,000
Tex. Gulf	99.8	403,400	4,803,000	8,302,000	99.8	433,300	5,216,000	8,158,000
La. Gulf	100.0	98,600	1,662,000	4,711,000	100.0	93,100	1,477,000	4,593,000
Inland Texas	76.5	103,000	1,266,000	2,455,000	76.5	96,000	1,228,000	2,369,000
N. La. and Ark.	97.0	44,600	134,000	684,000	97.0	41,300	125,000	747,000
Rocky Mtn.	89.4	42,700	1,841,000	639,000	89.4	43,300	1,848,000	649,000
California	96.7	491,800	12,875,000	98,761,000	96.7	480,100	12,950,000	99,342,000
Total U. S.	95.1	2,263,400	39,394,000	132,210,000	95.1	2,288,000	39,513,000	132,635,000

Week Ending July 23, 1932, Compared to Year Ago

	Week ending July 23				Week ending July 18, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	457,700	6,003,000	7,677,000	100.0	457,400	6,394,000	9,628,000
Appalachian	91.8	93,900	1,825,000	1,121,000	91.8	103,600	1,367,000	1,289,000
Ind., Ill., Ky.	98.9	296,000	5,497,000	4,393,000	96.6	311,400	5,667,000	3,824,000
Okla., Kans., Mo.	89.6	231,700	3,488,000	3,467,000	89.6	305,400	2,717,000	5,132,000
Tex. Gulf	99.8	403,400	4,803,000	8,302,000	99.8	415,000	5,962,000	7,660,000
La. Gulf	100.0	98,600	1,662,000	4,711,000	100.0	125,400	907,000	1,946,000
Inland Texas	76.5	103,000	1,266,000	2,455,000	91.3	147,400	1,122,000	3,188,000
La. and Ark.	97.0	44,600	134,000	684,000	98.9	65,800	123,000	946,000
Rocky Mtn.	89.4	42,700	1,841,000	639,000	89.3	61,600	1,704,000	840,000
California	96.7	491,800	12,875,000	98,761,000	96.5	480,000	11,414,000	98,503,000
Total U. S.	95.1	2,263,400	39,394,000	132,210,000	94.7	2,473,000	37,377,000	132,956,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

Much Better Feeling in Chicago District Market and Distress Gasoline Is Being Eliminated

By ROBERT C. CONINE

Chicago Bureau, The Oil and Gas Journal

CHICAGO, July 25. — Much better feeling was evident Monday in the Chicago district gasoline tank car markets in the face of discouraging reports on the statistical side of these materials, and the indications that there will be some strong opposition to the expected move to advance the price of crude oil in the Mid-Continent. For one thing, the "distress" gasoline has been completely eliminated from the district. A Tulsa marketer should explain why he offers U. S. Motor and 400 endpoint gasolines at a quarter of a cent under the market, and then when he gets an immediate response from Chicago distributors says that the materials "have just been sold."

Refiners operating in the district, and the larger distributors are moving a slightly larger volume of gasolines on the open markets at prices slightly better than last week. Several marketers moved their quotations an eighth to a quarter of a cent above the high of the ruling markets thus marking their withdrawal at this time. Price ranges in the gasoline tank car markets are unchanged, but the quantity being sold at the low is barely representative.

Although it is a little early to expect activity in the fuel oils and distillates, there is every indication that refiners and a few distributors are looking for much higher prices in these markets than at any time in the past two years. One important refiner, probably the largest tank car seller of these products, says that within 30 days the trade is going to find that fuels and distillates markets will reflect the tightest condition in years. Reports are current of scarcity in several of the distillates and the 28-30 zero and 22-26 fuel oils. A major refiner is holding a low cold test 18-22 fuel oil at 10 cents above the low of the ruling markets. With the exception of producers of some extremely high pour test heavy fuels, refiners in general are showing little inclination to sell these materials. At any rate, most of them say they intend to get at least 65 per cent of the cost of their crude oil for their fuels. Some of the larger refiners say they have made considerably less fuel oil contracts to date than in any similar period. Prices in the fuel oils have not been moved up yet, but the tone is considered strong.

Jobber Buying Still Lagging

Jobber buying has not shown up according to schedule, although there appears to be some pickup. Blending continues to operate against the gasoline tank car markets, but there is a strong trend away from the wilder naturals. It is interesting to note that while distributors buy the 15-pound material at 2⅞ to 3 cents, their price to the trade gives them more than the usual eighth or quarter of a cent. Distributors have been selling this product as high as 3½ cents Group 3. A little low price blending naphtha is reported but this is far from representative. Pennsylvania producers offer the 15-pound natural at 3¾ cents, Group 3, with the alternative of an arrangement based on the published price of the 26-70 material. Chicago distributors accuse the Pennsylvania refiners of attempting to "bull" the market. Dissatisfaction is expressed on the proposition of basing the price of the more stabilized naturals on the 26-70 material. Producers say they lose as much as 40 per cent of the 26-70 natural when they bring it down to 17 or 15 pounds vapor pressure. It is reported in Chicago that one large producer of 15-pound natural gasoline has sold his entire August output to a Canadian interest. Notwithstanding the apparently ready market for naturals, buyers in Chicago district look for slightly weaker conditions as the off side of the peak demand season comes on, because "everybody seems to be making naturals."

Although the "distress" gasoline has been eliminated in Chicago district, and there is little need to worry about the small refiners who have been forced to liquidate stocks, some of the major companies are showing price cutting tendencies. Tank wagon Q.D.A.s of 5 and 6 cents have been too common, but now the larger companies appear strongly drawn to taking part in the open markets. However, most of the business sought is to ultimate consumers, such as the Benzoline requirement of 100 to 125 cars, down to the Sheboygan County Highway Commission's business of three cars. The Sheboygan business went to a major at 4.1 cents, Group 3, while refiners competing for the Benzoline business, offered Saturday, predict that bids will be as low as 4.125 cents, Group 3. A semimajor or two are reported to be drumming up business among the price cut station operators.

Service Station Developments

The major and semimajor refiners are producing a third-grade gasoline which requires little advantage in the way of price to win over the majority of "regular customers." At times such as these when the public appears to be sorely pinched for cash, 2 cents difference may easily decide a purchase, but when the difference becomes as much as 3.5 to 5.4 cents between the regular grade and the third grade, force of habit must be strong indeed to keep the customer attached to the regular grade. The third grade was intended to be 1.5 cents below the regular grade, but this is now the exception, and where the exception exists it is usually a case of the regular grade being brought down, as in Detroit where the regular sells for 13.6 cents and the third grade for 12.6 cents. Prices of the two grades at 18 important points in the territory are shown in the following table. A few changes the latter part of the week are noted:

City—	Third grade	Regular	Difference
Chicago	13.6	17.1	3.5
E. St. Louis	12.1	16.9	4.8
Joliet	14.6	17.6	3.0
Quincy	12.5	17.4	4.9
Davenport	13.0	17.7	4.7
Des Moines	12.9	17.7	4.8
Sioux City	13.0	17.3	4.3
Mankato	14.6	18.3	3.7
Minneapolis	13.0	18.4	5.4
Milwaukee	13.6	18.3	4.7
Kansas City	13.1	17.1	4.0
Springfield	14.0	17.6	3.6
St. Louis	11.9	16.6	4.7
St. Joseph	12.1	16.7	4.6
Green Bay	14.6	18.8	4.2
Detroit	12.6	13.6	1.0
Evansville	16.0	18.2	2.2
Indianapolis	15.9	18.4	2.5
Mason City	13.6	17.7	4.1

See No General Revision

In some quarters it is believed there will either be a general upward revision in the third grade markets or a territory-wide lowering of the regular grade, but it is indicated from reliable sources no changes may be expected before September 1. A revision with which Chicago marketers are more concerned is in connection with the three octane brackets in the gasoline tank car markets. It has been found that gasolines ranging up to 60 octane number do not differ, as to price, in the minds of Chicago distributors and jobbers from the "below 57 octane" materials. In fact, the dozens of distributors and jobbers who have been interviewed do not think of paying three-eighths of a cent premium for material under 62 octane number. If the premium is demanded the buyer takes low endpoint naphtha and fairly low vapor pressure natural gasoline and the refiner can keep his 58 or 60 gasoline until he decides that there is really not much in holding out for the premium.

In Chicago district at this time there is quite as much demand for the comparatively low antiknock gasolines as for the higher octane materials, and while 58 octane gasoline may be offered as low as 4½ cents, Group 3, to the trade, one cannot buy the "below 57 octane" gasoline any cheaper. Simply stated, some refiners are willing to sell their "middle octane" gasoline at the price of the low octane materials, but none of the refiners is attempting to sell the low octane gasolines below the ruling markets, and this is a considerable improvement over the markets last week when 4¼ cents could be settled on.

The high octane bracket is in another category entirely. While the movement of 375 and 360 endpoint gasolines may be practically negligible, there is still a good demand for "premium material," and it is understood major and semimajor companies over the territory and in the adjacent East have been buying quietly, and the few refiners who deal with distributors and jobbers exclusively are reported completely sold out.

Gasoline Tank Car Markets

Prices were unchanged but there is a much firmer undertone in the markets this week, and some buyers expect the price to advance slightly if more favorable news comes from the refining centers.

Naphtha Tank Car Markets

Naphtha tank car markets were unchanged in price, although some heavier lacquer diluents are making their appearances and taking business at about a cent below the price of the 180-250 material. This is lacquer diluent of 190° initial and 270° endpoint, and is offered at 7½ cents.

Kerosene Tank Car Markets

The kerosene tank car markets continue to show price improvement and slightly increased demand. Prices on the 41-43 and 42-44 materials moved up an eighth of a cent from the low of last week.

Fuel Oils and Distillates

Distillates are becoming the strongest products in the list, and fuel oils are reflecting the reluctance of refiners to commit themselves on any quantity of material. One refiner informed his buyers that his price on the 38-40 straw distillate (No. 2 oil) for delivery over August would be based on the present prime white price, 2½ cents, with a top of 3 cents. Monday's distillate prices were: 38-40 light straw, 2⅛ to 2¼ cents; 38-40 straw, 2 to 2⅛ cents, and 32-36 straw, 1⅞ to 2 cents. All of these prices represent an advance of an eighth of a cent. The U.G.I. range widened an eighth of a cent sympathetically to 1¼ and 1½ cents.

Survey Shows Substantial Improvement in Quality of Third Grade Gasolines

By ROBERT C. CONINE

CHICAGO, July 25. — Although the major and semimajor companies may little relish the position in which they now find themselves in regard to the relative popularity of their three grades of gasoline, of which a more or less detailed account is contained in this week's Chicago market letter, they may have the satisfaction of knowing that the cheapest gasoline sold at their stations is quite as good a product, and in some respects, better than their regular grade of less than two years ago. Ninety-one gasolines of major, semimajor and the more important price cutters are represented in the tables accompanying this article. The gasoline samples were taken in three areas of widely differing backgrounds: Chicago district, Detroit district and Tulsa district. A fair comparison may be made with the gasolines represented in tables on Page 38 of the June 16 issue of The Oil and Gas Journal.

It is apparent in all of these districts that the gasoline marketers, excepting a few cut-price operators, are guarding against vapor lock, and it will be noted that few sell a gasoline of more than 8 pounds Reid vapor pressure, while the majority hold all three grades to around 5 and 6 pounds. There are some exceptional cases where the vapor pressure is as low as 2.3, 3.6 and 4.4 pounds. The 2.3-pound material has 69 per cent distilling over at 284° F., and endpoint below 392° F., with per cent of residue less than 1 per cent. When one comes to the price cutters, however, the effect of overdoing the blending operation shows itself in vapor pressures of as high as 13.5 pounds.

Octane Ratings Differ

It will be noted that some of the gasoline marketers have little difference in the octane ratings of their regular and third-grade gasolines. Most of these marketers had regular grades of around 68 and 70 octane number a few months ago, while their third grade was in the neighborhood of 52 octane number. Now the gap in antiknock ratings has been narrowed.

Chicago District Gasolines

Co. and grade:	Oct. No.	Vapor press.	Sulph. %	% at 284°	% at 392°	% res.
A—						
Premium	78.0	5.7	.021	71.3	...	1.1
Regular	66.8	5.3	.03	60.5	97.0	1.0
Third	57.5	5.3	.03	51.0	93.5	1.3
B—						
Premium	79.2	6.4	.000	69.5	...	1.0
Regular	65.8	6.6	.02	69.0	...	1.1
Third	57.5	6.0	.005	59.5	96.0	1.2
C—						
Premium	75.0	5.9	.014	60.0	96.0	1.2
Regular	64.2	5.7	.08	58.0	96.0	1.1
Third	54.7	5.4	.03	56.0	96.0	1.5

(Continued on Page 27)

Motor Fuel Strengthens in East Coast Markets; Demand Not Showing a Decided Drop

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, July 25.—For the first time in many months a sellers' market on gasoline in East Coast territory appears in the making, reflecting a decided change in market sentiment and position. Quotations for both grades of gasoline were stronger at refineries in this area during the week, and it appeared that resale gasoline had been thoroughly liquidated, putting the market back under the complete control of the stronger interests in this territory. Buyers who have turned to California and the Gulf for low-priced gasoline for shipment to Atlantic ports have encountered unexpected strength at these points, so much so, in fact, that but a limited amount of actual business has been consummated. The wisdom of the recent purchases of distressed gasoline at these points by the stronger refining interests is now being amply illustrated in the generally tight market position for gasoline.

Refinery Gasoline

Prices are working to higher levels, as sellers who have been fractionally under the posted quotations of major refiners bring their prices into line with the general market. Resale gasoline has apparently been well liquidated, and price cutting has virtually ended in principal marketing areas here. Current posted prices at refineries at leading distributing centers are as follows: U. S. Motor (below 65 octane)—New York, 8 to 8¼ cents; Boston, 8¼ to 8½ cents; Baltimore, 8¼ cents; Charleston, S. C., 7¾ to 8¼ cents. U. S. Motor gasoline (65 octane and above)—New York, 8½ to 8¾ cents; Boston, 8¾ cents; Baltimore, 8½ to 8¾ cents, and Charleston, S. C., 8½ to 8¾ cents; all in tank car lots, f.o.b. refineries or terminals. In isolated instances, it may still be possible to shade these "official" prices by a quarter cent, but as a general rule, spot sales are going through within quoted levels.

Buyers have turned to the Gulf for gasoline in cargo lots to bring into this area, figuring on a wide margin of profit, but have found the Gulf market disappointingly strong. While U. S. Motor for export can be had at 4½ cents at the Gulf, the same grade, minimum 60 octane number, for coastwise shipment, cannot be bought under 6 cents, it is said, and it would even be quite a problem to locate much gasoline at this figure.

The same condition prevails in the cargo market in California, where distressed gasoline has apparently been largely cleared from the market, leaving the major interests the principal holders. As most of the major California companies have direct interests on the Atlantic seaboard, they are naturally averse to anything which would weaken price structures in this area, and consequently are holding firm at posted prices when solicited with bids on cargo shipments.

Tank Wagon Gasoline

Metropolitan New York is still the weakest spot in the territory, and localized price wars continue. In some parts of Brooklyn gasoline can be bought at filling stations as low as 8 gallons for $1, including all taxes, which makes a net price of but 8½ cents at the stations, which is under the tank car market at terminals here on leading brands. The price cutting, strangely enough, is on leading brands, and is in vogue mostly at congested consuming points, where several stations of major companies adjoin one another.

Outside of New York City gasoline prices are much higher, and marketers are fairly successful in maintaining posted prices. There were no general revisions in either tank wagon or service station prices during the week.

The extreme stress which leading refiners have laid on the high octane number and general all-around quality of their new grades of branded "regular" gasoline is reacting against sales of premium gasoline in many parts of the territory, it is reported, but thus far the price differentials on the premium grades continue to be maintained.

Kerosene

Refinery movement of kerosene was again along routine lines, with the market holding unchanged at 5½ to 6 cents, with the inside quotation applying on most sales. With inland Pennsylvania refiners quoting 45 kerosene as low as 4¾ cents, these sellers are giving East Coast sellers considerable competition in parts of the territory where freight rates are favorable to Pennsylvania. With Gulf sellers quoting kerosene at 4¼ cents, and a high grade available in California for cargo movement at 4½ cents, no immediate prospect of any price improvement locally is apparent.

Gallonage in kerosene tank wagon markets has held up seasonably well, with quotations unaltered throughout the list.

Fuel Oil

The market was quiet and routine, with the posted price for bunker "C" holding unchanged at 85 cents per barrel, terminals.

Six cargoes of California No. 2 furnace fuel oil are reported to have been booked during the past fortnight for shipment to Atlantic Coast ports, four of these cargoes being bought by an independent marketing company which has been active in the distribution of California gasoline on the Atlantic seaboard this season. These cargoes were reported booked at 2¼ cents, f.o.b. California, but the market is now in firmer position on the Coast, with sellers asking 2½ cents, and indications of further advances in prospect.

Demand for industrial fuel oils has shown material improvement recently, refiners report, and there is currently a good movement of 21 gravity furnace oil at 4 cents in tank car lots at terminals, with 26-32 Diesel oil moving well at 4 cents in tank car lots.

Gas Oil

Contract withdrawals accounted for the bulk of the movement in last week's market, with refiners continuing to post 4 cents in tank car lots at refineries on spot sales, although this price can be shaded fractionally.

California sellers have been quoting 30-34 gas oil as low as 1¾ cents, f.o.b., and eastern buyers are showing some interest in the Pacific Coast product. Considerable quantities of California gas oil have moved eastward thus far in the year in the form of contract deliveries to large industrial consumers here, and it is expected further business of this type will develop before the end of the year.

Tax Matters

Eastern refiners now have their business pretty well "lined up" so far as questions relative to the new import and excise taxes are concerned, and the uncertainty which characterized operations during the first few weeks in which the law was in effect has now been largely dispelled.

The trade is still wrestling with a few knotty problems incidental to the proper classification of certain types of oil which may be used as lubricants.

Diesel Oil

Conditions in the Diesel oil market were again without change, and the market remained held at $1.65 per barrel, in bulk, at refinery terminals at principal East Coast ports. The volume of business on contract deliveries was reaching satisfactory totals, but spot industrial demand had quieted somewhat.

Refiners are greatly interested in current experiments for the development of Diesel-burning automobile engines. Considerable progress has been made in recent experiments, it is understood, with electrical starting now forming the chief obstacle to be overcome.

Lubs

Spot demand for lubs had eased off somewhat, and tank car shipments of cylinder oils were lighter than during the previous week.

Quotations in the export market here were lower, reflecting the easier price views at the refineries. Six hundred steam refined was quoted locally at 21 to 22 cents, with 650 steam refined offering at 24 to 25 cents. The market for 600 Pennsylvania flash was held at 24½ to 25 cents, with 630 flash at a range of 29 to 30 cents. On Warren E sellers were quoting 23½ to 24 cents, Oil City E offering at 1 cent under these figures. Bright stocks were also easier at 32 to 33 cents for the light 140-150, and 30 to 31 cents for the dark 140-150.

Demand for red and pale oils for domestic shipment was limited to small lots for prompt and nearby delivery, and quotations remained unchanged on all grades. Consumers in many instances bought heavily last month and are carrying sufficient stocks to tide them over the balance of the current quarter.

Paraffin Wax

An easier undertone developed on the lower melting points, and prices were fractionally lower on several grades. Spot 120-122 a.m.p. was traded at 2⅜ cents per pound, one-eighth under the previous quotation, and 125-127 a.m.p. registered a similar drop to 2⅞ cents per pound, while 130-132 a.m.p. was off an eighth at 3¼ cents per pound. The market for the higher melting points remained steady.

Domestic demand continued held down to limited quantities, for immediate delivery, while export inquiry was also languishing.

Furnace Oil

Spot movement was of limited volume, with prices holding unchanged, but refiners reported they were making considerable progress in lining up contract business for the coming heating season.

Several leading domestic oil burner manufacturers have reduced their prices for oil heaters, and indications point to a continued good volume in new installations during the fall and winter in the eastern area, with resultant increased oil consumption.

Petroleum Exports

Featuring the local market was an unusually heavy shipment of gasoline and naphtha, aggregating some 2,500,000 gallons, on the Italian tanker Fulgor, the shipments being consigned to Algiers and Vado. Aside from this shipment, export movement continued confined to routine quantities.

The following table shows exports of principal refined petroleum products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	July 16	July 9	July 2
Gasoline	755,000	20,000	220,000
Naphtha	2,450,000	8,000	385,000
Kerosene	28,000	4,000	158,000
Fuel and gas oil	24,000	220,000	44,000
Lubricating oil	797,000	3,920,000	1,100,000
Petroleum, ref.	230,000	20,000	1,006,000
	Pounds		
Paraffin wax	1,025,000	1,030,000	895,000
Scale	53,000	30,000	10,000
Lub. grease	355,000	575,000	560,000

Political disturbances in South America are tending to restrict the normal movement of refined products to a number of important consuming countries, and demand from other markets failed to attain much volume during the week.

Imports

Imports of crude and refined petroleum at Atlantic and Gulf Coast ports during the week ended July 16 totaled 744,000 bbls., a daily average of 106,286 bbls., compared with 369,000 bbls., a daily average of 52,714 bbls., for the previous week, and a daily average of 165,536 bbls. for the four weeks ended June 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Baltimore	81,000
New York	589,000
Philadelphia	74,000
Total	744,000
Daily average	106,286
At Gulf Coast ports:	
All ports	None
At Atlantic and Gulf Coast ports:	
Total	744,000
Daily average	106,286
Daily average four weeks	165,536

Distribution of the week's imports was as follows:

Crude oil	576,000
Fuel oil	168,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended July 16 totaled 565,000 bbls., a daily average of 80,714 bbls., compared with 472,000 bbls., a daily average of 67,429 bbls. for the previous week, and a daily average of 55,357 bbls. for the four weeks ended July 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Baltimore	72,000
New York	421,000
Philadelphia	36,000
Others	36,000
Total	565,000
Daily average	80,714
At Gulf Coast ports:	
All ports	None
At Atlantic and Gulf Coast ports:	
Total	565,000
Daily average	80,714
Daily average four weeks	55,357

Classification of the week's California receipts was as follows:

Gasoline	543,000
Kerosene	10,000
Fuel oil	12,000

The following cargoes of California refined petroleum were reported afloat for East Coast ports during the week:

For Fall River, Mass.—80,000 bbls. of gas oil on the tanker W. S. Miller (Standard Oil Co. of California boat).

For New York—97,000 bbls. of gasoline on the Yankee Arrow, and 97,400 bbls. of gasoline on the Japan Arrow (both Socony-Vacuum Transportation Co. boats).

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	July 26		July 19	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04½	.05	.04½	.05
60-62 400	.04⅝	.05	.04⅝	.05
64-66 390	.04¾	.05⅛	.04¾	.05⅛
64-66 375	.04¾	.05⅛	.04¾	.05⅛
68-70 350	.04⅞	.05¼	.04⅞	.05¼
NORTH TEXAS—				
*U. S. Motor	.04⅜	.04½	.04⅜	.04½
60-62 400	.04½	.04⅝	.04½	.04⅝
64-66 390	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04¾	.05	.04¾	.05
64-66 360	.04⅞	.05⅛	.04⅞	.05⅛
†NORTH LOUISIANA—				
*U. S. Motor	.05¼		.05¼	
60-62 400	.05⅜		.05⅜	
†ARKANSAS—				
*U. S. Motor	.05¼		.05¼	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04½	.04⅝	.04½	.04⅝
60-62 400	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04¾	.05	.04¾	.04⅞
Aviation fighting grade	.05	.05½	.05⅜	.05⅝
68-70 360	.04⅞	.05	.04⅞	.05

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On July 26, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06¾	.07	.06⅝	.06¾
60-62 400	.06⅞	.07	.06¾	.06⅞
64-66 375	.07	.07⅛	.06¾	.07
68-70 350	.07¼	.07¼	.07	.07¼

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas.

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.06¼	.07¼	.06½	.07½
58-60 400	.06¾	.07¾	.06¾	.07¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.08	.08¼	.07¾	.08
Boston	.08¼	.08½	.08	
Baltimore, Md.	.08¼		.07¾	.08
Charleston, S. C.	.07¾	.08¼	.07¾	.08
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.08½	.08¾	.08¼	.08½
Boston	.08¾		.08½	
Baltimore, Md.	.08½	.08¾	.08¼	.08½
Charleston, S. C.	.08½	.08¾	.08½	.08¾
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05¾	.05½	.05¾
U. S. Motor, below 65 octane number	.05¼	.05½	.05¼	.05½

Naphthas

	July 26		July 19	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04½	.04⅝	.04½	.04⅝
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06½	.06¾	.06½	.06¾
ARKANSAS—				
48-50 450 (blending)	.05	.05⅛	.05	.05⅛
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04½	.04¾	.04½	.04¾
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¼	.06½	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.08½	.08¾	.08½	.08¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.09	.09½	.09	.09½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05½	.05¾	.05½	.05¾
Pet. thinner, 290, 300 i.b.p., 415 e.p., over 83° flash	.05	.05¼	.05	.05¼
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06	.06¼
Petroleum spirits	.04⅛	.05¼	.04⅛	.05¼

Natural Gasolines

	July 26		July 19	
OKLAHOMA (Group 3)—				
Grade 18-55	.02½		.02⅝	.02½
Grade 26-70	.02⅛		.02	.02⅛
Grade 30-70	.01⅞	.02	.01¾	.02
°Low vapor pressure grades:				
15 lb. v.p. (max.)	.02⅞	.03	.02⅞	.03
11 lb. v.p. (max.)	.03¾	.03⅞	.03⅝	.03¾
NORTH TEXAS—				
Grade 18-55	.02½		.02⅜	.02½
Grade 26-70	.02⅛		.01⅞	.02
Grade 30-70	.01⅞	.02	.01¾	
°Low vapor pressure grades:				
15 lb. v.p. (max.)	.02⅞		.02¾	.02⅞
11 lb. v.p. (max.)	.03¾		.03⅝	.03¾
NORTH LOUISIANA—				
Grade 26-70	.02⅜		.02¼	
CALIFORNIA—				
75-78 375	.04¼	.05¼	.04½	.05¼

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of American effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All grades have minimum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

	July 26		July 19	
OKLAHOMA (Group 3)—				
41-43	.02¾	.02⅞	.02⅝	.02¾
42-44	.02⅞	.03⅛	.02¾	.03
NORTH TEXAS—				
40-41	.02⅝		.02½	
41-43	.02⅝	.02¾	.02½	.02⅝
†NORTH LOUISIANA—				
41-43	.03¼		.03¼	
42-44	.03½		.03½	
†ARKANSAS—				
41-43	.03¼		.03¼	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	.04¾
46	.04¾	.04⅞	.04¾	.04⅞
47	.04⅞	.05⅛	.04⅞	.05⅛
CHICAGO (Based on Group 3)—				
41-43	.02¾	.03	.02⅝	.02⅞
42-44	.02⅞	.03	.02¾	.03
*CALIFORNIA—				
38-40 high burning test	.04	.05	.04	.05
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	July 26		July 19	
OKLAHOMA (Group 3)—				
39-40 prime white	.02⅛	.02¼	.02	.02⅛
38-40 light straw	.02⅛		.02	
NORTH TEXAS—				
38-40 light straw	.02⅛	.02¼	.02	.02⅛
CHICAGO (Based on Group 3)—				
38-40 light straw	.02⅛	.02¼	.02	.02⅛
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.03¾	.04	.03¾	.04

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	July 26		July 19	
OKLAHOMA (Group 3)—				
32-36 straw	.01¾	.01⅞	.01¾	
36-38 straw	.01⅞	.02	.01¾	.01⅞
38-40 straw	.02	.02⅛	.01⅞	.02
39-41	.02⅛	.02¼	.02	.02⅛
NORTH TEXAS—				
38-40 straw	.02		.01⅞	.02
†NORTH LOUISIANA—				
36-40	.02⅜	.02½	.02¼	.02½
†ARKANSAS—				
32-36	.02¼	.02½	.02¼	.02½
CHICAGO (Based on Group 3)—				
32-36 straw	.01⅞	.02	.01⅝	.01¾
38-40 straw	.02	.02⅛	.01⅝	.01⅞
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¼	.03½	.03¼	.03½
NEW YORK (Bayonne, N. J.)—				
32-36	.04½		.04	.04½
36-40	.04½		.05	.05½
21 (industrial)	.04			

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	July 26		July 19	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅜	.01½	.01⅜	.01½
U.G.I. (G.O.)	.01¼	.01⅜	.01¼	.01⅜
32-36, zero to 15 (G.O.) high flash	.01½	.01⅝	.01½	.01⅝
28-30, zero to 10	.50	.55	.50	.55
26-30, zero to 10	.50		.50	
24-26	.42½	.45	.42½	.45
20-22	.40	.45	.40	.45
16-20	.35	.40	.35	.40
Below 16	.32½	.35	.32½	.35
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	.01⅜
22-26	.45	.50	.45	.50
Below 20	.30	.35	.35	.45
NORTH TEXAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.32½	.35	.32½	.35
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01¼	.01½	.01¼	.01⅜
28-30 (zero)	.55	.60	.55	.60
22-26	.40	.45	.40	.45
18-22	.25	.30	.25	.30
Below 18	.22½	.27½	.22½	.27½
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.50	.65
15-19 Bunker (tank car)	.45	.65	.45	.65
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.70		70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-32 Diesel (tank cars)	.04			
†Bunker C	.85		.85	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.c.b. refineries in Chicago area.

Breeze (screenings)	3.50	3.75	3.50	3.75
Still runs	3.75	4.00	3.75	4.00
Lump and egg	5.00	5.50	5.00	5.50

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	July 26		July 19	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13

500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¼
30 pour test	.12¾	.13	.12¾	.13
180 vis., No. 3, 25 pour test	.15½	.16	.15¾	.16½
200 vis., No. 3:				
Zero pour test	.22	.23½	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.17	.17¼	.18	.18½
30 pour test	.17		.17¾	.18
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07¼	.07	.07¼
300-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.07¾	.08
400-5-6	.08	.08¼	.08	.08¼
450-5-6	.08¼	.08½	.08¼	.08½
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.08¾	.09
700-6½ plus	.09	.09¼	.09	.09¼
750-6½ plus	.09	.09½	.09	.09½
900-6½ plus	.12	.13½	.12	.13½
NEW YORK (Bayonne, N. J.)—				
Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	
PENNSYLVANIA—				
122-124	.01⅞		.01⅞	
124-126	.02		.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅜		.02½	
125-127	.02⅞		.03	
130-132	.03¼		.03⅜	
133-135	.04		.04	
135-137	.04⅛		.04½	
Petrolatum in barrels in carload lots:				
Dark green	.01¾			
Amber	.02⅛			
Extra amber	.02½			
Cream	.04⅝			
Lily white	.05½			
Snow white	.06½			

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	July 26		July 19	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.23		.23	
150-160 D, 0-10	.22		.22	
150-160 D, 10-25	.21½		.21½	
150-160 D, 25-40	.21		.21	
150-160 E	.21		.21	
PENNSYLVANIA—				
600 S.R.	.14	.15	.14	.15
650 S.R.	.17	.17½	.17	.17½
600 Pennsylvania flash	.18	.18½	.18	.18½
600 D filtered	.22½	.23	.22½	.23
600 E filtered	.16¾	.17	.17	.17½
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash:				
10 pour test	.28	.30	.28	.30
15 pour test	.27	.27½	.27	.27½
25 pour test	.26	.26½	.26	.26½
35 pour test	.26		.26	

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	July 26		July 19	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾

Export Prices

GASOLINE

GULF COAST—	July 26		July 19	
U. S. Motor	.04½		.04½	
60-62 400	.04⅝		.04⅝	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55, 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04⅜		.04⅜	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.04	.05	.04	.05

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.22	.22½
650, steam refined	.24	.25	.25	.26
600, Pennsylvania flash	.24½	.25	.26	.27
630, Pennsylvania flash	.29	.30	.31	.32
600, Warren E	.23½	.24	.24½	.25
600, Oil City E	.22½	.23	.23½	.24
Light 140-150 Bright Stocks	.32	.33	.34	.35
Dark 140-150 Bright Stocks	.30	.31	.32	.33

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Apr. 1, 1932)† ..... $ .98
East Texas (April 11, 1932)‡ ..... .98
Corsicana heavy* ..... .64
Other fields ..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.75
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.55
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932) 1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

PENNZOIL CO.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.97
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.96
Includes Titusville district.
Group C 1.95
Includes Turkey and Tidiout districts.
Group D 1.94
Includes Bear Creek and Porkey districts.
Group E 1.92
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective April 29, 1932)

Bradford, Pa. $2.02
Allegany, N. Y. 2.02

PURE OIL CO.
(Effective April 25, 1932)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70
Kelly's Creek, W. Va. 1.70

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties.... See gravity table

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.
lies, light (Aug. 24, 1931) ..... $ .75
lies, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (June 1, 1932) ..... .90
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... Mid-Continent gravity table
LaBarge ..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (June 1, 1932) 1.10
Elk Basin (June 1, 1932) 1.10
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) .... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

West Texas

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States.)
Toboro, Pecos County (Apr. 11, 1932)†.. .55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B classifications discontinued by leading buyers.....
.....See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Apr. 11, 1932)‖ .....
.....See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)† .....
.....See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	Kansas and Oklahoma	North and Central Texas	East Central Texas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Salt Creek and LaBarge, Wyoming	North Louisiana and Arkansas	Gulf Coast (Texas-Louisiana)	Cameron, Meadows, Louisiana	Iowa and Lockport, Louisiana
	1	2	3	4	5	6	7	8	9	10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.83
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents. Humble Oil & Refining Co., effective July 18, 1932, posted following prices for Conroe crude: 35-35.9 degrees, 90 cents; 36-36.9 degrees, 92 cents; 37-37.9 degrees, 94 cents; 38-38.9 degrees, 96 cents; 39-39.9 degrees, 98 cents; 40 and above, $1.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 27)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

July 26, 1932

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	17.1	17.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	16.9	4.0	9.3
Joliet	17.6	17.6	4.0	10.1
Peoria	17.6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.7	4.0	10.4
Des Moines	17.7	17.7	4.0	10.4
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	9.7
Minneapolis	18.4	18.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	18.3	18.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.6	13.6	4.0	10.6
Grand Rapids	17.5	17.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.6
Evansville, Ind.	18.2	18.2	5.0	9.9
Indianapolis	18.4	18.4	5.0	10.1
South Bend	18.7	18.7	5.0	10.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	11.5
K. C., Mo.	15.1	15.1	4.0	8.7
Springfield*	17.1	17.1	4.0	8.0
St. Louis*	16.6	16.6	4.0	9.4
St. Joseph	16.7	16.7	4.0	7.5
Wichita, Kans.	15.9	15.9	4.0	7.0
Bartlesville, Ok.	15.5	18.0	5.0	9.0

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade shown above.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 2 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (22-26 zero), 200 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6 cents and 7½ cents; 32-36, 5½ cents and 7 cents; 28-30 4¾ and 6¾ cents; 24-26, 4¼ cents and 5¼ cents; 18-22, 4 cents and 5 cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southern District
STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.*	23.0	23.0	7.0	11.0
Augusta	22.5	22.5	7.0	14.5
Macon	23.0	23.0	7.0	13.0
Savannah	21.0	21.0	7.0	13.5
Birm'ham, Ala.	21.0	21.0	7.0	11.0
Mobile	21.0	21.0	7.0	10.0
Montgomery	22.5	22.5	7.0	14.5
Jackson, Miss.	21.0	21.0	7.0	12.5
Vicksburg	20.5	20.5	7.0	10.5
Jack'ville, Fla.	20.0	20.0	8.0	12.5
Miami	23.0	23.0	8.0	13.5
Pensacola	22.5	22.5	8.0	13.5
Tampa	22.0	22.0	8.0	11.5
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	18.0	18.0	6.0	10.5
Paducah	19.5	19.5	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District
CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	21.0	5.0	12.5
Pueblo	18.0	21.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18.0	21.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	19.0	22.0	5.0	16.0
Albu'que, N. M.	18.0	21.0	*7.0	14.0
Boise, Idaho	22.5	25.5	6.0	18.0
Twin Falls	22.5	25.5	6.0	18.0

*One-cent city tax.

Southwestern District
MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	14.5	17.0	5.0	10.0
Fort Worth	15.5	17.0	5.0	9.0
Houston	14.5	17.0	5.0	10.0
San Antonio	14.5	17.0	5.0	9.0
El Paso	14.5	18.0	5.0	12.0
Texarkana	18.5	18.5	5.0	†11.0
Muskogee, Ok.	14.5	17.0	5.0	8.0
Okla. City	14.5	17.0	5.0	8.0
Tulsa	14.5	17.0	5.0	8.0
Ft. Smith, Ark.*	16.0	16.0	7.0	†9.0
Little Rock	*18.0	*18.0	7.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2¼ cents to dealers. †Less 2 cents to dealers.

Pennsylvania-Delaware and Part of New England
ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	17.5	18.5	4.0	11.0
Philadelphia	16.5	17.5	4.0	11.0
Scranton	17.5	18.5	4.0	11.0
Allentown	17.5	18.5	4.0	11.0
Altoona	17.5	18.5	4.0	11.4
Erie	17.5	18.5	4.0	11.0
Dover, Del.	17.5	18.5	4.0	11.0
Wilmington	17.5	18.5	4.0	11.0
Springf'd, Mass.	17.5	18.5	4.0	8.0
Worcester	17.5	18.5	4.0	8.0
Boston	14.5	15.5	4.0	8.0
Providence, R.I.	13.5	14.5	3.0	9.0
Hartford, Conn.	16.5	17.5	3.0	8.0
New Haven	16.5	17.5	3.0	8.0

Nebraska
STANDARD OIL CO. (NEBRASKA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 2 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

Central South District
STANDARD OIL CO. (LOUISIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	19.0	19.0	*7.0	†12.0
Baton Rouge	18.0	18.0	6.0	10.0
Alexandria	19.0	19.0	*7.0	10.0
Lafayette	19.0	19.0	*7.0	†10.0
Lake Charles	19.0	19.0	*7.0	†12.0
Shreveport	18.0	18.0	6.0	†12.0
Knoxville, Tenn.	22.0	22.0	8.0	13.5
Memphis	20.5	20.5	8.0	9.0
Chattanooga	22.0	22.0	8.0	13.5
Nashville	21.5	21.5	8.0	13.5
Bristol	22.5	22.5	8.0	14.0
Lt. Rock, Ark.	19.0	19.0	7.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1-cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

Ohio
STANDARD OIL CO. (OHIO)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	18.0	18.5	5.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

Pacific Coast Territory
STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank truck†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	25.0	24.0	5.0	19.0
Portland, Ore.	21 0	20.0	5.0	16.5
Seattle, Wash.	22 0	21.0	6 0	16.5
Tacoma	22 0	21.0	6 0	16.5
Spokane	25.5	24.5	6 0	20 5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

Naphtha

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District
STANDARD OIL CO. (NEW JERSEY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	16.9	17.9	4 0	11.2
Newark	16 2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5.0	10.0
Baltimore	17.9	18 9	5 0	7.0
Cumberland	19 4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17 4	3 0	10.0
Danville, Va.	20.6	21 6	6 0	11.9
Norfolk	19.0	20 0	6 0	10.3
Petersburg	20 1	21 1	6.0	11.4
Richmond	19 4	20.4	6.0	10.7
Roanoke	20 6	21.6	6.0	11.9
Charles'n, W.Va.	19.3	20.3	5.0	11.6
Parkersburg	17.9	18.9	5.0	10.2
Wheeling	18 9	19.9	5.0	11.2
Charlotte, N. C.	22.2	23.2	7.0	12.5
Hickory	22.4	23.4	7.0	12.7
Mt. Airy	22 5	23.5	7.0	12.8
Raleigh	22 0	23.0	7.0	12 3
Salisbury	22 3	23 3	7.0	12 6
Charleston, S.C.	20.0	21.0	7.0	10 3
Columbia	21 9	22.9	7.0	12.2
Spartanburg	22 2	23 2	7 0	12 5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Prices shown above are for standard gasoline.

New York and Part of New England District
STANDARD OIL CO. (NEW YORK)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	17.0	18.0	4.0	9.0
New York	14.5	14.5	4.0	9.5
Buffalo	17 5	18.5	4.0	9.0
Rochester	17.5	18.5	4 0	9.0
Syracuse	17.5	18.5	4.0	9 5
Boston, Mass.	14.5	14.5	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Manch'r, N. H.	17.5	18.5	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

TANK WAGON CHANGES

Atlantic Refining Co. reduced the gasoline tank wagon and station prices 1 cent in Boston, Mass., on July and in Providence, R. I., on July 21.

Continental Oil Co. reduced the gasoline tank wagon and station prices 1 cent in Idaho and Utah on July 15.

Standard Oil Co. of Kentucky reduced the kerosene price to 8 cents in Paducah, Ky., on July 15.

Standard Oil Co. of Indiana reduced the gasoline tank wagon and station prices in Kansas City, Mo., to 15.1 cents on July 19.

Standard Oil Co. of New York, effective July 23, reduced gasoline service station price 1 cent at Boston, Mass., and Providence, R. I.

FRANCE INCREASES IMPORTS

NEW YORK, July 25.—Imports of crude and refined petroleum into France for the first five months of 1932, according to reports from Paris, totaled 1,613,887 tons, as compared with 1,533,097 tons in the comparable months of 1931.

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. §The Texas Company. †Yount Lee Pipe Line Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .65
Urania, La. (Apr. 12, 1932)	.60
East El Dorado, Ark. (Apr. 6, 1932)	.65
Stephens, Ark., below 29° (Apr. 12, 1932)	.61
Stephens, Ark., 29° and above (Apr. 12, 1932)	.64
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

South Central and Southwest Texas

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.64
Mirando (Apr. 1, 1932)*	.90
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski§	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. §Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ‡Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

Middle Western States
OHIO OIL CO.
(Effective April 11, 1932)

Lima	$1.16
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (July 13, 1932)*	.85
Muskegon (July 14, 1932)†	Mid-Continent gravity scale
Muskegon (June 30, 1932)‡	.95
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$ 47

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.80
Crude naphtha	3.32
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

CALIFORNIA A. I. M. E. METING

The California section of the A.I.M.E. has completed final preparations for the regional meeting of the institute to be held in Los Angeles July 28 and 29 and indications point to a large attendance. Scott Turner and A. B. Parsons, president and secretary of the institute, and a number of other distinguished visitors will be among those attending the meeting. The institute's meeting is particularly timely as the tenth Olympiad opens in Los Angeles on July 30. Visiting members of the institute will consequently have an opportunity of attending some of the Olympic games immediately following the final session of the two days' meeting. The program for the first day will be provided by the petroleum division and consequently be devoted to petroleum engineering. The San Francisco section is sponsoring the program for the second day and this session will be devoted to gold and silver. The meetings will be concluded with a banquet at the Biltmore Hotel on Friday evening.

Survey Shows Improvement in Third Grade Gasolines

(Continued from Page 22)

Co. and grade:	Oct. No.	Vapor press.	Sulph. %	% at 284°	% at 392°	% res.
D—						
Premium	71.5	6.7	.007	75.0	...	1.1
Regular	65.2	7.1	.005	65.0	95.0	1.3
Third	52.5	4.5	.005	67.0	96.0	1.0
E—						
Premium	70.6	6.1	.02	71.5	96.5	1.3
Regular	59.8	5.4	.006	72.0	97.5	1.1
Third	58.0	6.0	.03	57.5	93.0	1.2
F—						
Premium	78.0	6.4	.026	65.0	...	1.1
Regular	64.0	7.2	.028	61.0	...	1.2
Third	48.5	5.3	.03	56.0	91.5	1.1
G—						
Premium	60.2	5.5	.001	59.0	96.5	1.3
Regular	62.4	6.2	.032	60.0	96.5	1.3
Third	51.5	5.1	.018	53.5	92.0	1.2
H—						
Premium	79.5	6.7	.017	85.0	..	1.0
Regular	51.5	4.3	.003	56.0	95.0	1.3
Third	50.5	4.6	.016	56.0	94.0	1.2
I—						
Premium	74.5	7.8	.02	60.6	95.0	1.2
Regular	60.2	7.1	.064	62.0	94.5	1.0
Third	57.0	7.3	.037	63.0	96.0	1.2
J—						
Premium	67.3	11.1	.001	63.8	96.2	1.0
Regular	57.3	9.2	.02	59.5	93.2	1.3
K—						
Premium	66.5	13.5	.003	67.5	96.0	1.1
Regular	58.3	10.2	.04	66.5	95.8	1.6
L—						
Premium	65.5	7.7	.05	61.0	94.5	1.1
Regular	63.2	7.3	.06	61.9	95.2	1.2
M—						
Premium	64.4	6.4	.01	62.5	98.0	1.2
Regular	64.4	6.4	.02	63.0	96.0	1.2

Detroit District Gasolines

In Detroit area the subnormal condition which has prevailed for more than a year in the service station and tank wagon postings has not affected the quality of the gasolines sold there, the following tables show. The gasolines include those of Standard of Indiana, Shell, Gulf, Sinclair, White Star, The Texas Company, Sunny Service and Sun Oil Co.

Co. and grade:	Oct. No.	Vapor press.	Sulph. %	% at 284°	% at 392°	% res.
A—						
Premium	78.8	2.3	.001	69.0	...	0.9
Regular	66.0	6.5	.002	59.0	95.5	0.9
Third	56.0	5.8	.035	50.0	92.5	1.0
B—						
Premium	78.8	5.4	.000	72.0	...	1.0
Regular	67.1	5.6	.003	67.0	...	1.0
Third	50.0	5.5	.02	61.0	95.0	1.0
C—						
Premium	78.1	6.5	.001	68.5	95.0	1.0
Regular	66.8	6.1	.05	66.0	95.0	1.0
Third	56.0	5.1	.008	64.0	93.0	1.0
D—						
Premium	78.1	3.6	.003	58.0	97.0	1.1
Regular	65.3	6.4	.05	60.0	94.5	1.3
Third	52.4	5.8	.02	55.0	95.0	1.3
E—						
Regular	71.4	5.8	.001	65.0	94.5	1.1
F—						
Regular	67.5	6.0	.001	59.0	91.0	1.1
G—						
Regular	62.0	6.6	.002	63.0	96.5	1.0
H—						
Imported	64.2	5.4	.002	57.0	...	0.7
I—						
Benzol blend	71.5	7.0	.024	70.0	95.0	1.1

Tulsa District Gasolines

Gasolines of 16 companies were tested in the Tulsa, Okla., area, and here the third-grade motor fuels showed little or no response to the movement farther North to improve the antiknock quality of this grade. The regular grade gasolines, with few exceptions, were below the point in the commonly expressed middle octane bracket at which the jobbing trade in the Chicago district begins to offer a premium price. Results of tests follow:

Co. and grade:	Oct. No.	Vapor press.	Sulph. %	% at 284°	% at 392°	% res.
A—						
Premium	74.5	7.2	.016	61.5	93.5	1.1
Regular	60.5	5.8	.026	58.0	91.5	1.0
Third	55.0	6.7	.012	58.5	91.5	1.1
B—						
Premium	73.0	5.8	.017	67.5	91.5	1.0
Regular	61.0	5.6	.009	64.0	93.0	1.1
Third	51.0	5.1	.008	54.5	91.0	1.2
C—						
Premium	76.5	7.0	.014	71.0	95.8	1.0
Regular	61.5	5.0	.007	62.0	93.8	1.1
Third	52.0	6.8	.012	59.5	92.0	1.2
D—						
Premium	78.0	6.9	.013	60.0	...	1.0
Regular	63.5	8.1	.023	74.0	...	1.1
Third	54.0	4.4	.003	54.5	92.5	1.0
E—						
Premium	71.5	4.4	.014	58.0	92.0	1.0
Regular	61.0	5.4	.03	57.0	92.8	1.0
Third	49.0	4.0	.033	34.0	68.5	1.9
F—						
Premium	71.0	8.1	.009	85.0	...	1.1
Regular	60.0	8.2	.012	60.0	91.5	1.1
Third	53.0	7.2	.016	57.5	92.0	1.0
G—						
Premium	72.0	5.5	.012	59.8	93.8	1.0
Regular	60.5	4.9	.013	54.0	90.5	1.0
Third	50.0	5.0	.004	50.5	89.0	1.0
H—						
Premium	78.0	7.0	.014	85.0	...	1.1
Regular	62.0	6.0	.02	61.5	...	1.1
Third	54.5	6.0	.019	57.0	93.0	1.0
I—						
Premium	75.0	6.4	.032	60.0	93.8	1.1
Regular	60.5	5.9	.03	60.0	94.5	1.1
Third	54.5	5.0	.003	60.0	92.0	1.0
J—						
Premium	77.0	6.5	.004	80.0	...	1.0
Regular	61.1	6.6	.018	64.0	94.0	1.0
Third	55.0	6.2	.015	65.0	93.5	1.9
K—						
Premium	76.0	7.1	.041	60.0	92.0	1.1
Regular	60.5	7.5	.042	62.0	95.0	1.1
Third	51.5	6.9	.012	56.0	91.5	1.2
L—						
Premium	76.0	5.3	.015	62.0	96.0	1.2
M—						
Regular	60.5	5.0	.021	64.0	...	1.0
N—						
Premium	76.5	5.0	.017	71.0	96.0	1.1
Regular	59.0	6.7	.043	62.5	96.0	1.2
O—						
Regular	53.5	6.5	.012	60.0	89.5	1.0
Third	52.5	7.1	.081	59.5	91.5	1.1

Financial Authority Sees Improvement in Busines at Hand

NEW YORK, July 25.—Recent developments have strengthened the belief in some quarters that the low point of the depression has been approximately reached, says the Guaranty Trust Co. in its monthly review of business conditions.

"Not much positive change is expected in the traditionally dull summer weeks that lie immediately ahead," said the company. "Moreover, it is recognized that the outlook is still far from clear in many respects. But in the absence of further unsettling financial disturbances, there is a growing tendency on the part of certain commentators to believe that the beginning of improvement may be seen in the not distant future."

The net effect of economic developments of the month, said the bank, has been unquestionably good. It listed among the important incidents the Lausanne conference, the adjournment of Congress without enacting seriously adverse legislation, the cessation of gold outflow, the firmness of commodity prices, renewed confidence in the bond market and an improvement in "some basic industries, notably iron and steel." Offsetting influences were listed as the further recession in railway car loadings and a reappearance of banking disturbances in some areas which, however, "have been localized and now appear to have spent their force."

The bank stressed the importance of the recent rally in prices of hogs and cattle. That, it said, has created "more optimism among the farming population than has existed in many months."

Partly as a result of the mor th's new developments and "partly because panicky conditions inevitably tend to wear away as time goes on," the bank stated, "the psychological basis for economic progress in the United States seems stronger at the present moment than it has been for some time."

APPROVES UNIT OPERATION

AUSTIN, Tex., July 25.—Approval of unit operation in the gas fields of the Panhandle has been given by Texoma Natural Gas Co., one of the major pipe line concerns, providing the principles involved are legal in Texas.

In an official statement, Texoma commended the Railroad Commission for its gas conservation policy made effective on May 15 of this year, which the company said would insure orderly and conservative withdrawal of gas from the Panhandle.

The statement was made a part of the record at a commission hearing at Pampa.

PHILLIPS SEES IMPROVEMENT

Increased earnings of more than $3,500,000 for the first six months of 1932 over the same period last year was revealed by the Phillips Petroleum Co. in a report to stockholders. The net operating income for the first six months of 1932 was $8,843,790.69, compared with $5,300,876.43 for the first six months of 1931. The earnings do not include those of the Phillips Pipe Line Co. or of the Phillips Natural Gas Co., recently taken over by the parent company.

Frank Phillips, president of the Phillips Petroleum Co., hailed improvement of the oil industry as reflected in the company's earnings as an encouraging sign that business is on the upgrade.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$ 65	$ 65	$ 65	$ 65	$.65	$ 65	$.65	$ 65		$.55	$.55	....	$.65	$.55	$.55	$.65
15-15.9	.65	.65	.65	.65	.65	.65	.65	65	....	.55	.55	....	.65	.55	.55	.65
16-16.9	.65	.65	.65	.65	.65	.65	.65	65	....	.55	.55	....	.65	.55	.55	.65
17-17.9	.65	.65	.65	.65	.65	.65	.65	65	....	.55	.55	....	.65	.55	.55	.65
18-18.9	.65	.65	.65	.65	.65	.65	.65	65	....	.55	.55	....	.65	.55	.55	.65
19-19.9	.65	.65	.65	.65	.65	.65	.65	65	....	.55	.55	....	.65	.55	.55	.65
20-20.9	.69	.69	.71	.69	.69	.69	.69	.65	....	59	.59	....	.65	.57	.59	.69
21-21.9	.74	.74	.77	.74	.74	.74	.74	.66	....	63	.63	....	.67	.60	.62	.73
22-22.9	.79	.79	.82	.78	.79	.79	.79	.70	....	.69	.69	....	.70	.63	.65	.77
22-23.9	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.83
24-24.9	.89	.89	.92	.86	.89	.89	.89	.81	.73	.81	.81	.89	.76	.69	.72	.89
25-25.9	.93	.93	....	.91	.93	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....
26-26.9	.97	.97	....	.96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.02	....	....	.98	.94	1.02	.99	1.03	....	....	....	....
29-29.9	1.06	....	....	..	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....
31-31.9	..	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	..	..
32-32.9	..	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	..	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....
36-36.9	..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon, and Olinda, up to 25.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain, and **Coalinga and posted in Rincon as** follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met **Standard Oil Co.'s p**rices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents;38-38.9 degrees, $1.01; 39 degrees and over, $1.03, Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.19.9 degrees, 65 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22.22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Domingues.

NEWS FOR PETROLEUM REFINERS

Globe Company to Start Work Soon on Kansas Plant

Final preparations are now under way for the construction of a new refinery by the Globe Oil & Refining Co. at McPherson, Kans., according to official information. The company has been considering the construction of the refinery at McPherson for several months and now plans to start work immediately and complete constructioin before the end of the year.

The company plans to build a combination skimming and cracking plant with a crude oil capacity of 6,000 bbls. daily. Bids on the necessary equipment are now being received. The company's officials expect to decide before the end of the month whether the plant will be built by the company engineers or a turn-key job awarded to manufacturers.

The crude oil for the plant will be furnished by the Lario Oil & Gas Co. which is affiliated with the Globe interests. The Lario company now has 27 producing wells in the Ritz-Canton Pool of McPherson County with a potential production of 35,000 bbls. daily.

The Globe interests have been operators of refineries for several years. At present the Globe companies have an 8,000-bbl. refinery at Blackwell, Okla., and a 5,000 bbls. plant at Lemont, Ill. I. A. O'Shaughnessy is president of the companies. F. L. Jehle, vice president and general manager of the Globe company of Oklahoma, will have charge of the new refinery. Headquarters for the companies are maintained in Blackwell and Chicago with a tank car sales office in Tulsa.

The Globe plant is the second refinery project to be announced for McPherson since the first of the month. The Dickey Oil Co. of Wichita, Kans., started work on the construction of a 3,000-bbl. plant at McPherson last week.

INVESTIGATE DETROIT SITUATION

The United States Senate in a resolution adopted July 16 directed the Federal Trade Commission to complete its final report on the dumping of foreign oils and gasoline in the city of Detroit. The resolution was offered by Senator Gore of Oklahoma. The investigation is to cover the operations of the Sunny Service Oil Co., large jobber of gasoline and lubricating oils at Detroit. For approximately one year the company has been importing Rumanian gasoline and selling it in competition with domestic gasolines.

WILLIAM P. WESCOTT DIES

NEW YORK, July 23.—William P. Wescott, vice president and treasurer of the Galena Signal Oil Co., died at his home at Highland Mills, N. Y., this week at the age of 67.

For many years, Mr. Wescott represented the Galena company in London. He was there in 1917, enlisted in the A. E. F. and was wounded in action.

He is survived by his widow, Mrs. Carrie A. Wescott; a daughter, Mrs. Helen W. Van Winkle, and a son, Albert L. Wescott.

START PILOT POINT PLANT

The Pilot Point Refining Co. at Pilot Point in Denton County, Wichita Falls district, started operations this week, operating at only part capacity, processing crude from the shallow low gravity pool north of the town. The crude is piped to the plant by a 4-inch line which was formerly used by the Texas Pacific Coal & Oil Co. Capacity of the plant is 500 bbls. per day.

Nearly 95% Rumanian Gasoline to Exporters

Nearly 95 per cent of all the gasoline shipped from Rumanian refineries during 1931 went into the export trade of that country, according to a tabulation published recently by the Moniteur du Petrole Rumain. During the six-year period, 1926-1931, gasoline exports averaged 90 per cent of all shipments of gasoline from Rumanian refineries, while, in quantity, an increase of nearly 10,000,000 bbls. was recorded. Shipments for local consumption registered a high point in 1928 and have decreased annually since then, while export shipments have more than doubled.

Year	Export shipments	Per cent of total	Interior shipments	Per cent of total	Total (bbls.)
1926	3,608,480	85.5	612,952	14.5	4,221,432
1927	4,619,716	86.1	746,394	13.9	5,366,110
1928	5,629,865	86.6	871,633	13.4	6,501,498
1929	6,820,579	89.0	842,469	11.0	7,663,048
1930	9,515,487	92.5	774,070	7.5	10,289,557
1931	13,153,512	94.5	760,019	6.5	13,913,531

Shipments of gasoline from Rumanian ports during the first two months of 1932 recorded substantial increases over the corresponding movements of 1931, but shipments for March of the present year were somewhat less than those of 1931.

State Attitude May Bring Abandonment of Refinery

ARDMORE, Okla., July 23.—The Pure Oil Co. is seriously considering the abandonment of its local refinery due to trouble of local oil interests with officers of the state fish and game commission. During the recent heavy rains in this territory local refiners and producers in this territory were not able to control all of the waste water washed into streams. The rains were so heavy that in several cases dikes, reservoirs and ponds were washed away. Arrests have been made by state officials claiming streams were being unnecessarily polluted.

It is felt that the attitude of officials is working an unnecessary hardship on oil interests in this territory and if it is not changed will result in the shutdown and removal of refineries wherever possible. The Pure refinery is a pioneer plant of this territory.

TO BUILD SMALL PLANT

FORT WORTH, Tex., July 23.—W. H. Stowell and others of Breckenridge, Tex., are now shipping material to Mertzon in Irion County, where they will erect a 100-bbl. refinery to process the high gravity, sweet crude oil produced in the small shallow area a short distance southwest of that town. It will be completed near the middle of August. Mr. Stowell formerly was connected with the Humble Oil & Refining Co. refinery at Houston, and since that time has been operating in East Texas.

There are 10 shallow producers in the Irion County Pool, two having no outlet and the other pumping intermittently, producing between 75 and 100 bbls. per day. The Paramount Refining Co. plant at San Angelo has heretofore been processing the crude.

DR. R. E. WILSON TO SPEAK

Dr. R. E. Wilson, in charge of the research and development department of the Standard Oil Co. of Indiana, will be one of the speakers at the eighty-fourth meeting of the American Chemical Society which will be held at Denver, Colo., August 22 to 26. Doctor Wilson will speak on the subject, "The Mechanism of Lubrication." The program for the petroleum division of the society will be announced within a few days.

Beaty Urges Adjustment of Operation to Demand

Rational operations in the oil industry, with producers and refiners cutting "the garment to fit the cloth," should return a fair profit under present conditions, members of the American Petroleum Institute are told in a discussion of the economic situation by Amos L. Beaty, in "The President's Page" of the Quarterly, institute membership publication for July. Coupled with a plea for sportsmanship and fair play in effecting sensible curtailments, President Beaty recalls that the American Petroleum Institute's economic committee forecasts a decline of a little more than 6 per cent in demand for motor fuels for the last nine months of 1932 as compared with the same period last year, and that he, along with other individuals, has estimated a greater decline.

"Whatever the correct figure is," he said, "whether the decline in demand is 6 per cent, or 15 per cent, or somewhere between—the industry is in a fortunate position comparatively. What would the steel industry give to have a demand equal to 85 per cent of that which it enjoyed in 1929? What would the railroads of the country give to have back 85 per cent of their traffic and revenues for 1929? How happy would be any major industry of the country with 85 per cent of 1929 volume!

"The basic fact in our case is that we are in a trend which is sharply upward, except for the general depression. The drift of transportation from other forms to those involving the consumption of our products is, and for some years has been, steady and strong; and there is no telling what the consumption of gasoline and motor oil would be today if the depression had not intervened. Undoubtedly it would be somewhat below the volume we have built for, but it would be far in excess of 1929. The volume we have, however, is sufficient to produce fair profits—even in these times—if operations are conducted on a rational basis. Our effort, therefore, is to rationalize, or, in other words, cut the garment to the cloth."

SEEK TO IMPROVE CODE

A more general use of safe methods for protecting oil tank steamers and oil burning steamers against the ravages of fire and explosions is being sought by representatives of the National Board of Fire Underwriters, the National Fire Protective Association, the American Petroleum Institute and other agencies that attended a session of the conference committee on oil fuels and cargo, Wednesday afternoon, July 27, at the offices of the National Board of Fire Underwriters, 85 John Street, New York.

Notwithstanding earnest efforts of these various agencies, there has been a heavy toll in human life and property destruction during the past 10 years, and it is believed possible that additional safeguards may have to be set up to reduce existing hazards. Along with an agenda for discussion before the conference, H. E. Newell, engineer of the fire underwriters board and chairman of the conference committee, sent detailed reports of 86 fires and explosions on gasoline and oil tank ships and barges since 1918, including five that have occurred during 1932.

TO BUILD URUGUAY PLANT

NEW YORK, July 23.—The Administracion Nacional de Combustibles, Alcohol y Portlant, at Montevideo, Uruguay, has called for bids, to be presented in Montevideo by October 31 next. The contemplated refinery is to have daily throughput capacity for approximately 2,800 bbls.

Pure Will Install Recovery Unit at Muskogee Refinery

The Pure Oil Co. has awarded a contract for the construction of a new vapor recovery and stabilization plant at its Muskogee, Okla., refinery. The unit is a part of a general improvement program at the company's largest Oklahoma refinery.

The plant will be built to take care of approximately 5,500,000 feet of gas daily at the Muskogee refinery. The company's Gyro cracking units will furnish 3,500,000 feet of this gas and 1,500,000 feet of gas from Cross units with the remainder tank gas. The gas will average around 6½ gallons per 1,000 cubic feet.

The equipment to be installed includes one 50x5 absorber with 26 trays. The high and low-pressure steam stills will be 42'x4'. A cooling tower with a capacity of 1,200 gallons per minute will also be installed. The Pure company over the past two years has installed modern vapor recovery and stabilization plants at its Smiths Bluff, Tex.; Marcus Hook, Pa., and Toledo, Ohio, refineries.

Expect Action Soon On Proposal to Buy Richfield

With Harry F. Sinclair, chairman of the executive committee and H. R. Gallagher, president of the Consolidated Oil Corp., both in California, it is expected that some definite action will be taken this week in regard to the purchase of the properties of the Richfield Oil Co. of California. The Consolidated is also reported to be bidding for the properties of the Rio Grande Oil Co.

According to the Los Angeles Examiner two offers were made Monday for the assets of the Richfield Oil Co. of California, one by the Standard Oil Co. of California and the other by the Consolidated corporation.

The Richfield concern now is in equity receivership, and the offers, according to the newspaper, were made to committees representing bondholders, stockholders and unsecured creditors.

The Standard's offer was given as $12,000,000 in 5 per cent, 15-year debentures in a reorganized company, principal and interest guaranteed, together with 200,000 shares of Standard common stock, $500,000 to cover expenses of the protective committees, and the furnishing, up to $4,000,000, of cash to satisfy dissenters to the plan.

It was stated the Consolidated offer was $17,500,000 in 6 per cent 15-year consolidated debentures, $2,500,000 in cash, 300,000 shares of Consolidated common stock, $500,000 for committee expenses and up to $5,000,000 to satisfy nonassenters to the plan to make Richfield a wholly owned subsidiary of the Sinclair group.

MAY REOPEN REFINERY

The Sinclair Refining Co. may reopen its refinery at Argentine, Kans., if arrangements can be made with officials of Kansas City, Kans., to have the plant property removed from the city limits. According to reports from Kansas City, officials of the Sinclair company have agreed to reopen and expand the refinery if the company is relieved of the burden of city taxes.

The Argentine refinery has a capacity of 11,000 bbls. of crude oil daily. The 640-acre tract on which the refinery is located was taken into the city of Kansas City in 1925. The refinery has been shut down since the first of the year.

NATURAL GASOLINE MANUFACTURE

Richfield and Rio Grande Factors in Western Operations

LOS ANGELES, Calif., July 23.—If the companies now reported to be bidding for the properties of the Rio Grande Oil Co. and the Richfield Oil Co. of California are successful, it will mean changes in the natural gasoline situation in this State. Officials of the Consolidated Oil Co. are expected to arrive here next week for the purpose of completing negotiations for the Rio Grande Oil Co. on a basis of an exchange of stock. The same company and the Standard Oil Co. of California and the Shell Oil Co. of California are all reported to be negotiating for the properties of the Richfield Oil Co. which have been operated by a receiver over the past year and half.

Should the Consolidated company be successful in securing the control of either the Richfield or Rio Grande companies it is expected that the company will continue to operate the natural gasoline plants and maintain a separate department for that purpose. The Consolidated company at present does not have representation in this territory. However, should the Standard or Shell acquire the properties of the Richfield company, it is probable that there will be considerable consolidation of plants. The Standard through its subsidiary, the Standard Gasoline Co., is the largest manufacturer of natural gasoline in California and ranks second for the entire United States.

The Richfield plants are operated by a subsidiary known as the Signal Hill Gasoline Co. The original company was one of the early natural gasoline plant operators in the Los Angeles Basin. The properties were acquired by the Richfield company several years ago and were consolidated with those of the parent organization and the Pacific Western Oil Co., a producing and refining company which was also acquired by the Richfield company.

The natural gasoline plant of the Rio Grande Oil Co. located in the Santa Fe Springs Field of southern California has a capacity of 30,000 gallons daily. The Rio Grande has a 10,000-bbl. refinery located at South Gate, Calif.

Bulk of Decline in Motor Fuel Output Has Been in Natural Gasolines

The decline in the production of natural gasoline the first five months of this year was greater than in the case of straightrun gasoline and cracked gasoline, according to reports of the Bureau of Mines. From the standpoint of total motor fuel production, natural gasoline is of minor importance compared to straightrun and cracked gasoline production, but despite this fact the actual volume loss in production was greater in the case of natural gasoline than any other motor fuel product.

The following table shows the production of the principal motor fuel products for the first five months of 1931 and 1932 (data in thousands of barrels):

Gasoline—	1932	1931
Straightrun	83,695	87,105
Cracked	69,476	69,748
Natural	12,550	17,126
Benzol	578	873
Total	166,293	174,852

This table shows a reduction of 8,559,000 bbls. in motor fuel production the first five months of this year compared with the same period last year. Of this decrease straightrun gasoline accounted for 3,410,000 bbls. or 39.18 per cent; cracked gasoline, 278,000 bbls. or 3.2 per cent; natural gasoline, 4,576,000 bbls. or 53.4 per cent, and benzol, 295,000 bbls. or 3.4 per cent. Thus the decline in natural gasoline at the more than 1,000 plants scattered throughout the United States accounts for more than 50 per cent of the total decline.

Changing Position

This outstanding decline in natural gasoline production so far this year is changing the relative position of the several grade motor fuels as shown in the following table:

	—Per cent of total—	
	1932	1931
Straightrun	50.2	49.8
Cracked	41.8	39.9
Natural	7.6	9.8
Benzol	.4	.5
	100.0	100.0

For several years previous to 1932, cracking (reforming) some of the lighter natural gasoline output represented from 9 to 11 per cent of the total production of motor fuel in United States. This period marked a steady decline in the importance of straightrun gasoline in the total production of motor fuel with a similar increase in the relative position of cracked gasoline. The latter, which 15 years ago was a minor factor in motor fuel production, has now increased until it now represents 42 per cent of the total supply. This expansion due to cracking has had a sound economic basis since the art was discovered and it is predicted that the growth will continue until cracked gasoline represents more than 50 per cent of the total motor fuel supply in this country. The perfection of cracking processes has made cracking a profitable phase of plant operation. It has aided in furnishing outlets for the heavier fractions of crude oil which otherwise could not have been absorbed in the consuming markets except at distress prices. In addition, the superior quality of cracked gasoline, especially from the standpoint of antiknock value, has created a wide demand for this product and it is generally rated as a premium motor fuel. Due to this fact over the past three years has been a trend toward fractions of crude oil, as well as the heavy fuel and gas oils, in order to obtain gasoline of satisfactory quality.

Cracked Gasoline

Just how important cracking has become in refinery operations is shown in the following table which gives the percentage of straightrun gasoline and cracked gasoline produced by areas and also the natural gasoline blended at refineries:

Areas—	Straight-run	Cracked	Natural
East Coast	44.1	55.1	.8
Appalachian	52.9	45.6	1.5
Indiana, Illinois	43.7	54.5	1.9
Okla., Kansas	51.7	40.8	7.5
Texas inland	57.4	35.5	7.1
Texas Gulf	48.5	45.6	5.9
Ark. & La. inland	52.4	38.7	8.9
Louisiana Gulf	50.5	42.7	6.8
Rocky Mountain	35.5	53.0	11.5
California	60.7	25.2	14.1

From this table it will be noted that in the East Coast, Indiana-Illinois and Rocky Mountain refining areas the production of cracked gasoline exceeds the output of straightrun gasoline. In all those areas the cracked gasoline output represents more than 50 per cent of the total supply. This indicates the trend in refinery operations where plants have a well balanced operation which permits a near maximum yield of cracked gasoline.

The table also shows that the Rocky Mountain and California refiners as a group are the largest users of natural gasoline. This situation is largely explained by the fact that in these areas large supplies of natural gasoline in relation to refinery output are available and if the local refiners did not purchase the natural gasoline it would be necessary to transport over long distances at prohibitive freight rates in order to secure outlets.

In the Rocky Mountain area, the Salt Creek Field of Wyoming is a large producer of natural gasoline and it is moved by pipe line to the refineries of the Midwest Refining Co. located at Casper, about 45 miles from the field. The Midwest also controls the bulk of the natural gasoline in the field. In California also, a substantial part of the natural gasoline is moved by pipe line and water from the natural gasoline plants to the California refineries. This type of transportation is relatively cheap when compared with rail transportation and this saving makes the purchase of naturals more attractive to refiners for use as blending material. Practically all of the California and Rocky Mountain production of natural gasoline is absorbed by refineries in those areas. Some water shipments of stabilized natural gasolines have been made from California to export and Atlantic seaboard movement.

East Coast refiners, who probably are the most unfavorably located from the transportation end in the use of natural gasolines, purchase the smallest quantity. The table shows that less than 1 per cent of the motor fuel production of East Coast refiners is represented by natural gasoline. The rapid expansion of cracking at East Coast refineries accounts in part for this trend. The eastern refiners, despite the high freight rates, at one time were large purchasers of natural gasoline.

Final Report of the Bureau of Mines, Department of Commerce, Covering Natural Gasoline Production in United States by Areas

(Data in millions of gallons)

NATURAL GASOLINE:	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1931	1930
Production by fields:														
Appalachian	8.9	7.6	8.4	6.8	5.9	4.2	3.7	4.0	4.4	5.3	6.1	7.2	72.5	89.2
Kentucky, Illinois and Indiana	1.2	1.0	1.1	.8	.8	.6	.7	.7	.7	.9	1.0	1.1	10.5	13.5
Oklahoma	44.1	39.8	44.6	42.6	43.7	38.8	39.4	27.0	26.5	32.2	37.8	38.4	454.9	591.2
Oklahoma City	3.8	3.5	4.7	4.9	5.9	5.6	5.3	1.5	.8	3.5	6.4	7.9	53.8	38.3
Osage County	7.7	5.7	6.2	5.9	5.8	5.3	5.3	4.3	5.2	5.2	5.2	4.9	66.7	76.2
Seminole	18.6	17.6	19.6	18.9	18.4	16.5	16.9	11.6	9.5	12.1	15.0	14.0	188.7	257.5
Rest of State	14.0	13.0	14.1	12.9	13.6	11.4	11.9	9.6	11.0	11.4	11.2	11.6	145.7	219.2
Kansas	2.9	2.8	3.2	3.0	2.7	2.4	2.5	2.5	2.6	2.7	2.6	2.8	32.7	35.1
Texas	40.8	36.7	39.4	37.2	35.7	34.3	34.0	34.2	32.7	35.0	33.0	33.7	426.7	491.3
Panhandle	20.0	17.8	18.6	17.8	17.4	16.9	17.0	17.6	16.6	19.0	16.6	17.0	212.3	250.4
North Texas	3.5	3.1	3.3	3.0	2.6	2.5	2.4	2.1	2.6	2.3	2.3	2.1	31.8	43.6
West Central	11.1	9.8	10.7	10.3	10.0	8.9	8.9	8.6	7.7	7.9	7.8	8.0	109.7	148.0
Rest of State	6.2	6.0	6.8	6.1	5.7	6.0	5.7	5.9	5.8	5.8	6.3	6.6	72.9	49.3
Louisiana	5.7	5.7	5.8	5.5	4.9	4.7	4.3	3.4	4.3	4.3	4.9	4.5	58.0	73.7
Arkansas	2.5	2.4	2.5	2.5	2.4	2.3	2.2	2.0	1.9	2.0	1.9	1.7	26.3	30.6
Rocky Mountain	5.7	4.9	5.3	5.5	6.1	6.0	5.9	6.1	6.4	6.5	5.8	5.8	70.0	56.2
California	64.9	54.4	62.5	59.4	60.7	57.2	57.3	55.5	51.0	53.1	51.8	52.5	680.3	829.7
Long Beach	13.8	12.4	13.5	11.9	11.8	11.1	10.9	10.6	9.9	10.1	9.7	9.7	135.4	178.5
Ventura Avenue	4.9	4.4	5.2	4.9	4.8	4.5	4.4	4.4	4.4	4.5	4.2	4.5	55.1	68.0
Huntington Beach	2.0	1.8	2.0	1.9	1.9	1.7	1.7	1.7	1.7	1.7	1.5	1.5	21.0	33.0
Kettleman Hills	16.5	11.9	14.8	15.0	15.6	15.7	15.9	14.4	11.7	12.6	13.7	14.3	172.1	155.3
Santa Fe Springs	12.2	10.0	11.3	10.9	11.3	9.9	10.0	9.8	9.5	9.7	9.3	9.2	123.1	207.9
Rest of State	15.5	13.9	15.7	14.8	15.3	14.3	14.4	14.6	13.8	14.5	13.4	13.3	173.5	187.0
Total United States	176.7	155.3	172.8	163.3	162.9	150.5	149.9	135.4	130.5	142.0	144.9	147.7	1,831.9	2,210.5
Daily average	5.7	5.5	5.6	5.4	5.3	5.0	4.8	4.4	4.4	4.6	4.8	4.8	5.0	6.1
Stocks at end of period	25.5	29.1	37.1	42.3	41.8	36.1	35.9	30.3	25.8	22.0	26.9	27.1	27.1	24.3
Indicated deliveries	175.5	151.7	164.8	158.1	163.4	156.2	150.1	141.0	135.0	145.8	140.0	147.5	1,829.1	2,211.6
Blending at plants:														
Natural gasoline used*	.5	.6	.6	.6	.6	.6	.6	.5	.5	.5	.4	.2	6.2	10.6
Naphtha used*	.6	.6	.7	.6	.7	.7	.7	.7	.7	.6	.6	.3	7.5	11.7
Stocks of blends end of period	.5	.5	.5	.4	.4	.3	.4	.5	.4	.4	.3	.3	.3	.5

*Exclusive of California.

All Not Satisfied With Potentials in Oklahoma City Field

OKLAHOMA CITY, Okla., July 25.—During the past week there has been an organized effort to have new potentials taken in the Oklahoma City Field and to change the allowables on all wells. It is expected that the Oklahoma Corporation Commission may order new potentials at the next meeting to be held July 27.

At the present time the allowable production from the Oklahoma City Field is based on 1.4 per cent of the potential, plus a flat allowable of 25 bbls. per well on all wells even with proration. Potentials are taken without reference to the position of wells in the field.

Operators are expected to ask that new potentials be taken by sections or quarter sections. Under this plan, all wells in a section would be opened at the same time for four-hour runs. Potentials of all wells are expected to be taken during the month of August. The last tests were made in April, 1931. The present potential production of the field is estimated at 3,600,000 bbls. a day by the commission.

One of the chief contentions by those opposed to proration enforcement has been that the additional flat allowable permits the same additional flow of oil from a small well as from a 50,000-bbl. well. Some express the opinion that the hearing of July 27 may result in changing the potential to a percentage basis.

It is believed that if new potentials are taken on a four-hour basis the pipe line companies will be able to handle the production without exceeding their nominations.

The military forces which are enforcing proration orders in the Oklahoma City Field have started to take potential gauges on several wells that have been shut down making up overproduction. It is estimated there are between 35 and 40 wells in this classification.

TWIN STATES GAS SALE

NEW YORK, July 25.—The Delaware court of chancery has confirmed the sale of the assets of Twin States Natural Gas Co. to the Hillcrest Natural Gas Co., according to Donald B. Adams, chairman of the reorganization committee for Twin States. The officers of Hillcrest Natural Gas Co. are Donald B. Adams, president; Harry B. Lambert, vice president; Howard Reid, secretary and assistant treasurer, and Frank Shaver, treasurer. The foregoing, with Phillip de Rondo, Clarence Dauphinot and Walter R. Manny, comprise the board.

COLLOIDAL MARINE FUEL

The London Petroleum Times writing of the oil and coal fuel test on a Cunard steamship says:

"The Cunard Co. has shown that colloidal fuel can be successfully operated in the largest ocean-going vessels. It is now for enterprises with both oil fuel and coal interests to push the matter further. The cost of plants for the mixing of the fuel is not excessive, but it will naturally not be easy for the forthcoming of the necessary capital to provide such facilities. The sum of £250,000 would, it is stated, supply the colloidal fuel mixing plant sufficient for all British lines. The oil industry has clearly nothing to fear from this innovation. If increased economy can be achieved from colloidal fuel for marine purposes, then it follows that there will be an increased use of oil fuel in ocean-going craft which today do not use oil fuel at all. It appears to be a case where our fuel oil supply companies can co-operate with those in coal to the benefit of both industries."

RABBS RIDGE FIRE OUT

HOUSTON, Tex., July 25. — After burning five days and causing damage estimated at $100,000, the Humble Oil & Refining Co.'s No. 4 Thompson, a wild gasser in the Rabbs Ridge Pool of Fort Bend County, 30 miles west of Houston, extinguished itself Monday.

Late Fields

GULF COAST

HOUSTON, Tex., July 26.—A new shallow sand has been proved at Orchard, Fort Bend County, with the completion by Gulf Production Co. of its No. 33 Moore, southwest flank of the dome, in a sand at a total depth of 2,242 feet. The well came in flowing better than 900 bbls. through a one-half inch choke with a pressure of 175 pounds. Gravity of the oil is 28°. The bulk of production so far has been in sands ranging from 3,500 to 4,100 feet. The well also extends the line of production northwesterly around the dome, being 560 feet north and 560 feet west of the nearest well.

OKLAHOMA

A proposed community test may be started in a few weeks as the result of a pooling agreement of seven operators. These operators have put 640 acres into the pool so that a test may be drilled to the Wilcox sand. The test is expected to be in the SW cor. SE SE, Section 14-12-3, Lincoln County. In the community block are Amerada Petroleum Corp., Twin State Oil Co., Indian Territory Illuminating Oil Co., The Texas Company, H. F. Wilcox Oil & Gas Co., Mid-Kansas Oil & Gas Co., Continental Oil Co. The test will be drilled by the Sovereign Oil Co.

N. B. Christian and others' No. 1 in the SE cor. NE, Section 7-18-9, Creek County, was drilling at 1,750 feet on the last reports. It is expected to reach the Bartlesville sand in a few days.

The first hearing of the H. F. Wilcox Oil & Gas Co.'s appeal on its conviction by the Oklahoma Corporation Commission has been set for Wednesday, July 27, by the State Supreme Court. The Wilcox Oil & Gas Co. alleges that the commission has no authority to make rules and regulations for proration in the Oklahoma City Field, and that the company did not have sufficient time to prepare for the previous hearing. The commission ordered the company's 10 wells in Oklahoma City Field shut in and the same day the military enforcement group started sealing the gates and outlets on all the wells and lease tankage.

Murray, Stephens and others' No. 1 Harper-Turner, in Section 22-11-3w, flowed 881 bbls. of oil in two hours from the Wilcox sand at 6,440-6,520 feet.

Mid-Continent Petroleum Corp.'s No. 1 Schrader, NW cor. NE, Section 6-6-5, Pottawatomie County, found oil in the Calvin sand at 2,830-52 feet, opening a new pay horizon for that area. The well flowed 160 bbls. in 16 hours on July 24, and 120 bbls. in 14 hours on July 25. This well is expected to stimulate future development of that area.

H. H. Taylor and others' No. 1 Bean, SW cor. NW, Section 36-7-4, an extension well in the Sacred Heart territory of the St. Louis Pool, swabbed 90 bbls. of oil in two hours from the pay at 4,174-4,225 feet.

KANSAS

Activity continues in McPherson County, where seven tests started spudding during the week. Three of these were in the south extension to the Voshell Pool, two in the Johnson Pool and two in the Ritz-Canton Field. The tests were: Shell Petroleum Corp. and others' No. 4 Winn, NE cor. SW NW, Section 7-20-1; Mylius and others' No. 1 Ediger, SW cor. SE SW, Section 16-21-3w; Madison and Aylward's No. 1 Krehbiel, SE cor. NE SE, Section 29-21-3w; Shawver and others' No. 3 Lively, NE cor. NW NW, Section 21-19-1; Oil State Co.'s No. 1 Unruh, SW cor. SE NE, Section 21-21-3w; Mid-Kansas Oil & Gas Co.'s No. 2 Bridgens, SE cor. NW SW, Section 2-20-3w; Barnsdall Oil Co.'s No. 1 Bridgens, SW cor. SE, Section 35-19-3w.

Gled Oil Co., Skelly Oil Co. and others' No. 1, C NW NW, Section 2-24-4w, Reno County, found 9,500,000 feet of gas at 3,495 feet and 10 bbls. of fluid an hour, of which 50 per cent is water. Most of the pay was found in the last 25 feet.

Slick, Pryor and Lockhart's No. 1, C SW SW NW, Section 7-17-10w, a wildcat in Ellsworth County, has cemented the casing preparatory to making a production test of the oil showing found in the Kansas City lime at 4,140-52 feet. It flowed 227 bbls. in 16 hours when first drilled.

Slick, Pryor and Lockhart's No. 1, C SE NE, Section 27-18-10w, Rice County, was estimated to be making 50 bbls. an hour from the Silicious lime at 3,241-43 feet. The 5-inch casing was cemented at 3,238 feet and the crew was preparing to drill the plug.

Magnolia Petroleum Co.'s No. 1, C SE NE NE, Section 28-20-3w, an extension well to the northeast of the Voshell Pool, in McPherson County, found the Silicious lime at 3,535-37 feet, without any oil showing. The test was carrying a hole full of water from the Simpson formation when they found the Silicious lime. The company plans to drill the test a few feet deeper and then may abandon.

The Oil Man's Calendar

July

28-29—Los Angeles, Calif., Pacific Coast regional meeting American Institute of Mining & Metallurgical Engineers.

July-August

July 16 to August 28—Atlantic City, N. J., third American Fair, Atlantic City Auditorium.

August

10—Nashville, Tenn., Tennessee Oil Men's Association, Noel Hotel.

22-26 — Denver, Colo., American Chemical Society.

23-26 — Spokane, Wash., Pacific Coast Gas Association, Hotel Davenport.

30—Cleveland, Ohio, National Air Races.

30-31—Cleveland, Ohio, Society of Automotive Engineers.

September

10-17—Cleveland, Ohio, Society of Automotive Engineers.

14-16—Atlantic City, N. J., annual meeting, National Petroleum Association.

15-17—Atlantic City, N. J., American Trade Association Executives.

21-23 — Philadelphia, Pa., North American Gasoline Tax Conference.

22-23—Chicago, National Association of Motor Bus Operators.

Last week—Columbus, Ohio, Ohio Petroleum Marketers Association.

30-Oct. 1.—Dallas, Tex., American Institute of Mining & Metallurgical Engineers, petroleum division.

October

3-7—Buffalo, N. Y., National Metal Exposition and National Metal Congress, and American Society for Steel Treating.

3-7—Washington, D. C., National Safety Council.

4-6—Toronto, Canada, Society of Automotive Engineers, transportation meeting.

10-14—Atlantic City, N. J., annual convention, American Gas Association.

11-12—Louisville, Ky., Kentucky Petroleum Marketers Association.

(?) —Chicago, Ill., American Society of Mechanical Engineers (fuel division).

November

10—Los Angeles, Calif., California Natural Gasoline Association.

10-12—Atlanta, Ga., Southeastern Economic Conference.

15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

5-9—New York, N. Y., American Society of Mechanical Engineers.

5-10—New York, N. Y., National Exposition of Power & Mechanical Engineering.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association. Rainbow Hotel.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association. Rainbow Hotel.

1933

April

20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

Effect of Regulation on Calgary Situation

CHATHAM, Ontario, July 23.—A new development in the Calgary gas situation as a result of proposed conservation measures in the Turner Valley Field is indicated in a recent statement by Stanley J. Davies, consulting geologist, of Calgary, that a proposed order restricting the aggregate flow of the entire Turner Valley Field to 100,000,000 feet a day would automatically reduce the natural gas allowance of the Royalite Oil Co. to around 22,500,000 feet. The Royalite company supplies the Canadian Western Natural Gas, Light, Heat & Power Co. under an exclusive contract, and practically the entire supply for Calgary and other communities served by the Canadian Western company has in recent years come from the Turner Valley Field. While the Royalite production is thus reduced, the city of Calgary last winter had a peak load of over 60,000,000 feet a day.

The Royalite company is under no obligation to supplement its supply by purchase, so that other means will, according to Mr. Davies, be necessary to maintain the Calgary supply. According to Mr. Davies, the board's recent tests of the field have indicated drops in closed-in pressure of from 50 to 250 pounds for individual wells during the past 11 months, with a general reduction in gas flow of from 15 to 60 per cent. There has, also, been a marked but variable increase in the gas-naphtha ratio.

RUSSIA'S NEW FIELD

The reported newly discovered oil fields in the Ural Mountain district described as among the richest oil reserves in the world are centered in three regions—Bashkiria, where the deposits are estimated at hundreds of millions of tons; the Emba River region, farther northward, where the deposits are estimated at 400,000,000 tons, and the Uhktinsk region, in the northern Urals, where the reserves have not been estimated but are thought to be enormous.

According to members of the Russian Academy of Science, each of the three fields is larger than the oil fields in the Baku district and Grozny, which produce enough oil to put the Soviet Union second only to the United States in world production.

The new fields are in a district where the Soviet is building up gigantic factories and industrial centers.

Leaders of the oil industry say exploitation of the new reserves will be started immediately. The output will be devoted entirely to internal needs and is expected to free the whole output of the Baku region for export.

Why the Oil Industry Outlook Is Better

By W. T. ANDERSON

A study of the data in The Oil and Gas Journal Semiannual Review published in this issue, shows the first six months of the present year did in fact bring a turn to the oil industry. It still has a long way to go to return to normal conditions in which every branch obtains a fair profit on its operations but it can be said that a start at least has been made during the first half of 1932.

During that period, 36 gravity crude oil in the Mid-Continent brought an average price of 86 cents per barrel at the well whereas during the same period last year the same crude averaged only 67 cents per barrel and for the whole of 1931 only 63 cents per barrel.

Thus we have had something more than a 25 per cent increase in the price received for crude oil, although the industry can not operate at a profit at the 86 cent figure as is evidenced by the fact that the average price for 36 gravity crude in 1930 was $1.23; in 1929 it was $1.39 and in 1928 it was $1.31.

The situation would have been much worse if constructive effort by leaders in an effort to promote orderly production had not succeeded the chaos which existed during the latter part of last year. Prices would have been even lower than they were in 1931 which was the lowest since petroleum became a major industry.

While improvement in the refinery markets was not as great as in the case of crude oil, the average revenue derived from a barrel of crude during the first six months of this year was larger.

The most important grade of gasoline in Oklahoma brought 3.81 cents a gallon during the first half of 1932 but while this was low compared to normal conditions it was at least better than the 3.35 average during the first half of 1931 or the 3.45 average for the whole of that year.

Kerosene and several other refined products brought better average quotations than they did in the comparable period last year, but this does not mean that refiners can be satisfied with what they were able to accomplish in the first six months of this year since prices are still between 50 and 200 per cent below the five-year average previous to 1930.

A return to normal prices in the refinery market for the balance of the year is a necessary development for the well being of the entire industry and there seems to be no good reason why it cannot be accomplished.

A great deal has been said—too much in fact—regarding the "great" decline in consumption of petroleum products.

Government data for the first five months of the year show that domestic demand for gasoline was 4.3 per cent less than in the similar period of last year. Exports declined 11.9 per cent but the total demand was still approximately 95 per cent of the 1931 figure for the same period.

Kerosene showed a worthwhile increase in consumption. There was an increase of 14.4 per cent in domestic demand and a decline of 19.5 per cent in exports but the total demand for the first five months was actually 4.3 per cent larger.

Both the domestic demand and exports of lubricants decreased in the first five months but the indicated consumption for the half year is approximately 90 per cent of the 1931 period.

Complete data on fuel oil and gas oil are not given by the government but the available information indicates that the demand for these products was around 90 per cent of normal.

Figures for the entire industry, based on the government's reports, show that the total demand for all oils in the first five months was 387,780,000 barrels, a decrease of only 6.4 per cent.

Certainly a manufacturing industry the demand for whose principal product is still 95 per cent of the previous year and the demand for all its products still above 90 per cent cannot give that relatively small loss as an excuse for unsatisfactory prices.

The reason must rather be found in the other end—overproduction, although there was a substantial reduction in the production of crude oil during the first half of the year.

The six months' production from domestic fields totaled 396,073,868 barrels, or 19,750,322 barrels less.

Contrasting the twelve months' production ending June 30, this year, with the like period preceding the total was 826,053,120 barrels or 22,570,909 barrels less.

Showing how effectively production has been restricted the combined production of California, Oklahoma and Kansas for the six months of 1932 declined 25,624,479 barrels. East Texas alone, however, increased 29,219,855 barrels.

Outside of East Texas the decline was 48,970,177 barrels or an average of 269,000 barrels per day.

On June 1 the total of all oil stocks was 656,955,000 barrels, a decrease of 20,000,000 barrels from the same date a year before. Refinable crude, however, declined 30,000,000 barrels.

Total stocks of all oils have decreased 65,000,000 barrels from the total of 700,000,000 barrels on June 1, two years ago.

These figures show that, notwithstanding the reduction in production accomplished there was still an excess of production of all products over demand, and this condition continues.

Stocks are still topheavy, both crude and refined. Two conflicting attitudes are represented in the current discussion of this subject. On one side is the insistence that crude stocks must be reduced materially; on the other, the argument of producers that these withdrawals should be made conservatively so as not to depress the price to the producer whose co-operation has resulted in the reductions already made.

Possibly a mutually beneficial adjustment might be reached by a study of the situation not from the standpoint of either side of the controversy but for the general good of the industry at large.

The demand for petroleum products is fairly well known in advance; even the expected decline can be estimated approximately. Taking that as a basis for the balance of the year it should be possible to arrive at an understanding as to the respective proportions of withdrawals from stocks and production required to meet that demand so that neither side would be unduly penalized.

The main thing, from the industry's standpoint, is stabilization of the market which cannot be attained or maintained while oversupply is a menace. That menace can be removed by agreement upon a workable basis of limiting supply to demand.

So far as production is concerned the industry is in better position to restrict overproduction than it ever was. The Supreme Court of the United States has upheld conservation in Oklahoma. A three-judge Federal court has upheld conservation in Texas. The California situation has been adjusted on a market basis.

These curtailments have been effected through the co-operation of the vast bulk of the producers in the belief that the only way to secure fair return for their oil was by avoiding overproduction. They know that the huge stocks which overhang the market must also be reduced, but argue that the rate of withdrawal should not be so rapid as to narrow the outlet for current production to a point where the producer cannot live.

This leads back to the refining branch, which, by overproduction of gasoline, weakens its own market. A definite understanding by the whole industry as to just what the proportions of crude production and crude withdrawals should be to supply the demand would reduce the temptation to overrun operations in the manufacturing branch.

Some such understanding seems to be the need of the moment if the industry is to make a better showing in the last half of the year. It is needed not only to make a better showing but to prevent a slip backward.

But it cannot be reached until the units in the industry begin to think as partners in the same enterprise, not solely as "cat and dog" competitors.

Increase of New Wells in U. S. Over First Half Last Year Credited to Rush in East Texas

By JAMES McINTYRE

The mad rush to drill up the East Texas Field, which shows little signs of subsiding, was responsible for the fact that in the first half of 1932, 373 more wells were drilled in the United States than in the same period last year. Outside of the East Texas Field, including Rusk, Gregg, Smith, Upshur and Cherokee Counties, the number of wells completed were 1,422 fewer than in the same period last year.

There were 6,746 wells completed in the first half of this year in all the fields in the United States. As the accompanying table will show this number is far below that of other six months' periods in past years. In the first six months of 1923 13,013 wells were completed. The percentage of oil wells in the first half of 1932 was unusually high and the percentage of gas wells and dry holes correspondingly low. The high percentage of oil wells may be attributed mainly to the East Texas Field, where failures have been very few on the 120,000-acre structure.

Only 1,574 dry holes were drilled in the United States as against 2,266 in the same period last year, and only 547 gas wells were completed as against 1,119 last year. The relatively small number of dry holes shows plainly how wildcatting has declined in these days of big flush fields and low prices for crude oil.

The big decline in average initial production per well is accounted for by the fact that in the first half of last year there were no restrictions on East Texas wells and the completions were permitted to flow a full 24 hours, and it was possible to ascertain their initial output. This year the wells flow only a short time and the initial production figures are based on gauges of from a few minutes upward.

World's Greatest Field

The big East Texas Field, which has extended so that it takes in a part of Rusk, Gregg, Smith, Upshur and Cherokee Counties and has been proved up to the extent of 112,000 acres, was developed in the first half of this year much after the fashion of Mexia, Powell and Wortham. By that we mean that operators drilled as many wells as it was humanly possible to put down in the shortest possible time. At the close of the half year there were 6,500 oil wells completed in the field of which 2,687 were completed in the first half of this year. Many of these were very large potential producers but it was not possible at any time in the six months to get a 24-hour initial gauge on the big wells because of the restriction put upon production in the field. The wells were held down to a low average production per day in order to keep production down to a certain figure and no exception was made in the case of new wells. Some authorities placed an aribitrary figure of 2,600 bbls. as the average initial potential production of East Texas wells, but this figure was no better than a guess and really means nothing. That operators in East Texas lost all sense of balance may be seen by the fact that as the half year progressed there were more and more completed wells each month. All sorts of odd contracts were made between producer and driller in order to get wells down, even some of the larger oil companies promising to pay in oil in lieu of cash.

As the wells increased in number it was necessary for the State Railroad Commission to lower the allowable production per well, which at the close of the half year had dropped to 50 bbls. per well per day. Some of the wells in the field could have produced 10,000 bbls. in a day, so the spectacle of enormous potential producers being limited to a "squirt" of 50 bbls. per day was strange, to say the least.

At the close of June there were 209 wells on the pump in the East Texas Field and 106 wells were making salt water.

A gas area was discovered in the first half of the year in the southern Joiner area in Rusk County, and geologists estimate that there are 5,000 acres of gas-producing territory in the field.

It is estimated that 11,000 wells will have been drilled in East Texas before the field settles down to a merely production basis.

In the older East Central Texas district little work was done and in 19 counties outside of Rusk, Gregg, Van Zandt, Smith, Upshur and Cherokee Counties, only 41 wells were completed and all of them were dry.

New Coastal Fields

The new Conroe district in Montgomery County, Texas, just north of Houston, was the outstanding feature of development work in the Gulf Coast in the first half of the year. It was opened late in 1931 and only three wells were completed this year but they were wide apart and appear to have proved up an important pool, producing both oil and gas. The Gulf Coast Field as a whole fell off in drilling operations, compared with the same period last year. Only 360 wells were completed as against 506 in the first six months of 1931, but the oil wells completed averaged 736 bbls. in initial production as against 487 bbls. in the same period a year ago.

An entirely new field was opened in the Louisiana end of the Coastal division in Gueyden, Vermillion Parish, and indications of a new pool were found in a well in Matagorda County, Texas, by the United North & South Oil Co., which years ago opened the Luling Field. A number of important extensions to old fields were made in the first half-year period. Ten oil wells in the Rabbs Ridge Field average 1,548 bbls. per well, the highest initial production average reached in the entire field.

Southwest Texas Activities

Production, either oil or gas, was found in 13 wildcat wells drilled in the Southwest Texas area in the first half of the year. For many months this big territory, an empire in size, has been developing one-well pools and waiting for better business conditions before continuing development. The Southwest Texas area has been a Mecca for independent oil men and companies with small capital because of the opportunities presented to find oil without a large expenditure of capital and in the first half of this year wells were completed in no less than 37 counties and oil or gas production was found in 17 counties. Zapata County saw the completion of 85 wells in the first half of the year; 54 wells were completed in Starr County, 33 in Bexar County and 30 in Bee County. These led in development work. The 156 oil wells completed averaged 212 bbls. per well in initial production, but there were 189 dry holes drilled, an unusually high average for any producing division.

Plenty of Room in Panhandle

There remains much unexploited oil and gas territory in the Texas Panhandle, the development of which has been delayed until the flush fields in the eastern part of the State get down to a productive basis below pipe line demand. The first half of this year was a particularly dull one in the Panhandle. Only 65 wells were completed, as against 146 in the same period last year, and the oil wells had an average initial pro-

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SUMMARY OF COMPLETED WORK IN ALL THE FIELDS OF THE UNITED STATES IN FIRST SIX MONTHS OF 1932 AND IN SAME PERIOD OF 1931

	First 6 mos.	Comp.	Initial prod.	Dry holes	Gas wells	Oil wells	Av. in prod. (bbls.)
Eastern	1932	738	2,884	111	147	480	6.01
	1931	882	2,231	184	386	312	7.15
Central Ohio	1932	198	868	63	95	40	21.70
	1931	286	1,698	85	142	59	28.78
Michigan	1932	66	41,655	22	7	37	1,125.81
	1931	49	2,902	23	10	16	181.38
Lima	1932	56	619	11	24	21	29.48
	1931	70	453	15	41	14	32.36
Indiana	1932	75	1,462	34	23	18	81.22
	1931	89	1,075	43	24	22	48.86
Kentucky	1932	217	6,513	62	35	120	54.28
	1931	258	7,853	88	73	97	80.96
Tennessee	1932	.....	.....	....	....	....	.....
	1931	4	.....	....	4	....	.....
Missouri	1932	.....	.....	....	....	....	.....
	1931	3	.....	3	....	....	.....
Mississippi	1932	35	.....	8	27	....	.....
	1931	42	.....	27	15	....	.....
Illinois	1932	18	50	10	2	6	8.34
	1931	26	69	16	1	9	7.78
Kansas	1932	230	82,509	77	9	144	572.91
	1931	256	75,488	79	58	119	634.36
Oklahoma	1932	445	320,573	159	57	229	1,399.88
	1931	714	1,431,798	247	117	350	4,090.84
North Central Texas	1932	518	15,206	284	27	207	73.46
	1931	729	23,860	473	54	202	118.12
West Texas	1932	90	9,343	34	2	54	173.02
	1931	221	25,989	111	2	108	240.64
E. Central and E. Texas.	1932	2,823	*211,937	101	6	2,716	*75.07
	1931	1,056	2,071,016	113	7	936	2,212.63
East Texas gas area	1932	24	.....	18	6	....	.....
	1931	31	.....	27	4	....	.....
Texas Panhandle	1932	65	13,869	6	16	43	322.54
	1931	146	26,557	26	55	65	408.57
Gulf Coast	1932	360	136,068	167	8	185	735.50
	1931	506	128,997	224	17	265	486.74
Southwest Texas	1932	369	33,045	189	24	156	211.82
	1931	401	42,183	219	34	148	285.00
North Louisiana	1932	122	21,716	58	19	45	482.58
	1931	165	17,563	85	46	34	516.56
Arkansas	1932	18	335	16	....	2	167.50
	1931	42	2,078	23	5	14	148.43
Montana	1932	14	5,356	5	1	8	669.50
	1931	27	94	11	11	5	18.80
Wyoming	1932	14	1,546	5	....	9	171.78
	1931	29	4,979	5	4	20	248.95
Colorado	1932	18	57	14	2	2	28.50
	1931	19	1,186	9	3	7	169.43
New Mexico	1932	23	62,810	6	2	15	4,187.33
	1931	34	74,219	9	6	19	3,906.26
Utah	1932	1	35	....	....	1	35.00
	1931	2	.....	2	....	....	.....
California	1932	209	63,235	114	8	87	.....
	1931	286	188,750	119	....	167	1,130.24
First 6 months	1932	6,746	1,031,691	1,574	547	4,625	223.07
First 6 months	1931	6,373	4,131,038	2,266	1,119	2,988	1,382.54
Difference		373	*3,099,347	692	572	1,637	1,159.47
First 6 months	1930	11,360	4,057,729	3,393	1,249	6,718	604.01
First 6 months	1929	11,941	3,265,396	3,706	1,233	7,002	466.35
First 6 months	1928	10,455	3,113,947	3,428	1,273	5,754	541.18
First 6 months	1927	12,738	2,340,422	3,384	1,101	8,253	283.53
First 6 months	1926	12,995	1,317,432	3,644	1,087	8,264	157.86
First 6 months	1925	12,080	2,666,746	3,069	1,085	7,926	336.46
First 6 months	1924	10,940	1,707,093	2,457	1,114	7,369	231.66
First 6 months	1923	13,013	2,587,761	3,014	1,108	8,801	294.03

*In the first half of 1931 initial production in the East Texas Field was based on a full 24 hours' production, the field having then been under no restrictions. Since midsummer, 1931, the initial production has been based on short-time flows, ranging from a few minutes upward, as the wells were restricted to a small production per well per day and this included new wells.

Crude Oil Production in First Half of the Year Lowest Since Same Period Six Years Ago

By JAMES McINTYRE

In the face of a still enormous potential production of crude oil in the United States, the country produced only 396,023,868 bbls. in the first six months of 1932, an average of 2,175,955 bbls. per day.

It is the lowest production in the first half of any year since 1926 when the total reached only 360,395,621 bbls. The total was 19,750,322 bbls. less than in the first half of last year and 34,005,396 bbls less than the quantity produced in the last half of 1931. A total of 315,053 wells contributed to the aggregate output and the average production per well was only 6.91 bbls.

In the 12 months ending with June 20, 1932, 826,053,120 bbls. was produced in the United States, as against 848,624,029 bbls. in the 12 previous months, showing a falling off of 22,570,909 bbls. It will be recalled that the peak production of the United States was 1,004,266,723 bbls. in the 12 months ending December 31, 1929, showing a drop of 178,213,603 bbls. in the figures for the past 12 months. Thus the production for the 12 months ending June 30 averaged 441,441 bbls. per day less than the production for the calendar year 1929. At the same time it may be said that there is more known production now than there was then. It is kept stored in the ground, where it belongs until there is need for it.

Only 17 pools in the United States that figure in the prominent class increased their production over the same period last year. They show a combined increase of 41,519,498 bbls. On the other hand, 59 pools of the leading class showed a decrease in production amounting to 55,493,433 bbls. This shows a net decline of 13,973,935 bbls. in the prominent pools and in addition to that there was a net drop of 5,776,387 bbls. in the combined production of the hundreds and hundreds of old pools from Pennsylvania to California as compared with the production in the first half of last year.

East Texas Led All

The East Texas Field, composed of three pools, was the largest producer in the half year. The Longview Pool contributed 22,344,863 bbls., Kilgore 19,745,334 bbls. and Joiner 18,661,842 bbls., a total of 60,752,039 bbls. Oklahoma City, in Oklahoma, produced 18,187,268 bbls.; Long Beach, California, ranked next with 14,458,600 bbls.; Santa Fe Springs, California, followed with 11,740,034 bbls.; Yates, Texas, 11,288,305 bbls.; Kettleman Hills, California, 10,894,608 bbls. The dozen pools that make up the Seminole Field in Oklahoma, including Seminole, East Seminole, Little River, East Little River, Bowlegs, Earlsboro, South Earlsboro, East Earlsboro, Mission, Maud, Searight and Carr City, yielded a total of 18,110,284 bbls. The Van Pool in Van Zandt County, Texas, produced 8,820,888 bbls.

The fields that show an increase in production in the first half, compared to their production in the same period last year, were East Texas, Van, Mirando, Hutchinson County and Big Lake, all in Texas; Carr City Pool in Oklahoma; Dominguez, Kettleman Hills, Lost Hills-Belridge, Mount Poso, Coalinga, Coyote and Huntington Beach, in California, and that granddaddy of fields, Allegany-Bradford, in New York and Pennsylvania.

Among the more prominent fields that showed a decline in production were Oklahoma City; all but one of the Seminole Pools (that one being Carr City); Long Beach, Santa Fe Springs, Yates, Hendricks, Elwood, Ventura Avenue, Refugio, Darst Creek, Barbers Hill, Sugarland, Gray County in the Texas Panhandle; Hobbs, in New Mexico, and Salt Creek, Wyoming.

Oklahoma City dropped off 6,349,697 bbls. in the half year because the falling demand for oil in that field necessitated a reduction in the average daily pipe line runs. Oil buyers expressed a preference for East Texas crude because of its nearness to the coastal market, leaving Oklahoma City in the position of waiting until the demand improved. The big West Texas fields were in much the same predicament in which Oklahoma City found itself. They were made to wait while purchasers patronized the cheaper source of supply in East Texas—cheaper in the the sense of lower transportation cost.

Ups and Downs

The states that showed an increase in production in the first half of 1932 over their production in the same period last year were as follows:

INCREASE IN PRODUCTION

	Bbls.
New York	195,000
Pennsylvania	962,000
Michigan	1,439,000
Illinois	327,000
Indiana	28,000
Texas	10,116,739
Total	13,067,739

The declines in the other states were as follows:

DECLINE IN PRODUCTION

	Bbls.
Ohio	454,000
West Virginia	214,000
Kentucky	182,000
Tennessee	2,000
Kansas	2,168,231
Oklahoma	18,724,872
Louisiana	1,427,606
Arkansas	2,340,469
California	4,731,375
Montana	305,143
Wyoming	1,212,678
New Mexico	912,237
Colorado	143,449
Total	32,818,061
Total net decline	19,750,322

Oklahoma Down, Texas Up

It will be seen by the above figures that while Oklahoma, which could easily have increased its production, suffered a loss of 18,724,872 bbls. Texas enjoyed a gain of 10,116,739 bbls. At the same time attention is called to the fact that while the East Texas Field alone enjoyed an increase of 29,219,855 bbls. in production the remainder of the Lone Star State suffered a decline of 19,103,116 bbls. North Central Texas declined 1,485,565 bbls.; West Texas, 7,882,723 bbls.; the Panhandle, 968,231 bbls.; Gulf Coastal Texas, 7,401,449 bbls., and Southwest Texas, 2,469,391 bbls. Thanks to an increase of 1,994,657 bbls. in the Van Field, East Central Texas showed a net gain of 1,104,143 bbls.

The three East Texas pools, Longview, Kilgore and Joiner, contributed 29,219,855 bbls. of the total of 41,519,498 bbls. increase shown by 16 fields or pools in the country in the first half. The increase in the East Texas Pools was more than offset by the decline in production in 10 older pools, namely Oklahoma City, with a decline of 6,349,697 bbls.; Elwood, California, 3,069,665 bbls.; Refugio, Texas, 3,559,979 bbls.; Yates, Texas, 3,506,333 bbls.; Hendricks, Texas, 2,485,678 bbls.; Gray County, Texas, 1,954,004 bbls.; Playa Del Rey, California, 2,319,068 bbls.; Earlsboro district, Oklahoma, 2,365,899 bbls.; Smackover, Arkansas, 1,797,478 bbls., and Little River, Oklahoma, 2,118,528 bbls.; total decline, 29,526,324 bbls.

Comparison With Biggest Year

In the first six months of the six years, 1927 to 1932 both inclusive, the smallest production was registered this year and the largest in 1929. In the first half of 1929 as against the first half of 1932 there has been a total drop in production of 89,797,452 bbls.

Some producing divisions show a gain, but most show a decline. East Texas had no existence as an oil field in 1929 and its 60,752,039 bbls. produced in the first half of this year is all gain. Others showing a higher production this year than in the same period in 1929 are; New York, 223,000 bbls.; Pennsylvania, 938,000 bbls.; Michigan, 1,677,000 bbls.; East Central Texas, 6,269,249 bbls., and New Mexico, 6,065,609 bbls. Declining producing divisions and their decrease in production in the first half of this year as against the first half of 1929 are; Ohio, 895,000 bbls.; West Virginia, 764,000 bbls.; Indiana, 65,000 bbls.; Illinois, 457,000 bbls.; Kentucky, 468,000 bbls.; Kansas, 882,130 bbls.; Oklahoma, 48,906,450 bbls.; North Central Texas, 11,626,332 bbls.; West Texas, 32,725,202 bbls.; Texas Panhandle, 2,731,445 bbls.; Gulf Coast, 2,203,310 bbls.; Southwest Texas, 945,269 bbls.; Arkansas, 7,123,295 bbls.; North Louisiana 1,180,297 bbls.; Wyoming, 2,543,671 bbls.; Montana, 612,903 bbls.; Colorado, 640,705 bbls.; California, 50,940,340 bbls. It will be seen by a glance at the figures that Oklahoma and California, by curtailment of production and slowing up of drilling operations, have suffered a cut of production of 99,846,790 bbls. as against 89,797,452 bbls. for the whole United States.

Few Pools Show Increase

The following table shows the increases and declines in production in the principal pools and fields in the United States. The figures given show the production in the first half of this year and how they compared with the production in the same period in 1931:

INCREASE IN PRODUCTION IN THE PROMINENT POOLS

	Product'n first 6 months 1932 (bbls.)	Increase over same period in 1931 (bbls.)
Texas—		
Longview	22,344,863	16,366,455
Kilgore	19,745,334	5,147,738
Joiner	18,661,842	7,705,662
Van	8,820,888	1,994,657
Mirando	3,044,983	655,288
Hutchinson County	2,299,688	689,606
Big Lake	4,860,659	177,052
Oklahoma—		
Carr City	2,615,689	305,039
California—		
Dominguez	3,651,528	1,591,022
Kettleman Hills	10,894,608	4,922,458
Lost Hills-Belridge	1,673,776	429,134
Mount Poso	1,452,533	46,382
Coalinga	1,671,211	110,075
Coyote	1,844,o10	2,503
Huntington Beach	3,989,678	57,357
New York-Pennsylvania—		
Allegany-Bradford	6,486,441	1,319,070
Total increase		41,519,498

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SUMMARY OF CRUDE OIL PRODUCTION IN UNITED STATES FIRST SIX MONTHS OF 1932

	1927 prod. first 6 mos. (bbls.)	1928 prod. first 6 mos. (bbls.)	1929 prod. first 6 mos. (bbls.)	1930 prod. first 6 mos. (bbls.)	1931 prod. first 6 mos. (bbls.)	1932 prod. first 6 mos. (bbls.)	No. of oil wells June 30	Av. dly. prod. per well 6 mos. (bbls.)
New York	1,101,000	1,174,000	1,609,000	2,172,000	1,637,000	1,832,000	14,500	.69
Pennsylvania	4,750,000	4,829,000	5,489,000	7,344,000	5,465,000	6,427,000	76,900	.46
Ohio	3,842,000	3,594,000	3,252,000	3,390,000	2,811,000	2,357,000	36,700	.35
West Virginia	3,022,000	2,881,000	2,760,000	2,792,000	2,210,000	1,996,000	15,100	.73
Kentucky	3,209,000	3,633,000	3,464,000	3,878,000	3,176,000	2,994,000	15,650	1.05
Michigan	216,000	211,000	1,273,000	2,146,000	1,511,000	2,950,000	500	32.42
Tennessee	26,500	24,000	12,000	7,000	4,000	2,000	.....	....
Indiana	409,000	496,000	502,000	519,000	409,000	437,000	2,450	.98
Illinois	3,587,000	3,223,000	3,067,000	3,010,000	2,283,000	2,610,000	15,000	.96
Kansas	21,455,000	19,760,362	18,784,674	21,220,994	20,070,775	17,902,544	18,753	5.24
Oklahoma	129,565,618	117,458,526	126,020,255	117,779,527	95,838,677	77,113,805	58,244	7.28
North Central Texas	30,023,634	23,546,887	25,170,461	24,842,224	15,029,694	13,544,129	23,340	3.19
West Texas	15,915,827	58,209,778	65,533,126	58,824,487	40,690,647	32,807,924	2,195	82.12
Texas Panhandle	22,925,094	13,074,052	11,855,526	17,163,665	10,092,312	9,124,081	1,796	27.91
East Central Texas	7,673,768	4,298,691	3,712,775	5,616,731	8,877,881	9,982,024	974	56.31
East Texas	.....	.....	.....	.....	31,532,184	60,752,039	6,535	51.08
Gulf Coast	28,274,834	23,276,495	26,754,614	35,982,479	31,422,135	24,551,304	2,563	52.61
Southwest Texas	6,713,732	4,840,921	12,039,599	12,275,729	13,563,721	11,094,330	3,744	16.28
Arkansas	21,742,314	16,443,803	13,432,562	10,332,347	8,649,636	6,309,267	3,056	11.34
North Louisiana	9,068,817	8,118,780	6,449,462	7,259,246	7,227,389	5,269,165	2,489	12.22
Wyoming	10,779,747	10,561,844	9,145,923	8,927,810	7,814,930	6,602,252	3,532	10.27
Montana	2,073,040	2,063,213	1,809,606	1,646,357	1,501,846	1,196,703	1,429	4.60
Colorado	1,398,539	1,353,756	1,255,498	850,036	758,242	614,793	251	13.44
New Mexico	773,105	404,683	544,826	2,511,118	7,522,672	6,610,435	440	82.55
Utah	8,600	.....	.....	.....	.....	.....	.....	....
California	116,184,628	112,961,846	141,884,413	118,402,863	95,675,449	90,944,073	8,912	56.07
Total	444,738,797	436,438,637	485,821,320	468,893,613	415,774,190	396,023,868	315,053	6.91

THE GRAY PROCESS
ACCEPTED BY THE INDUSTRY

DOMESTIC LICENSEES

American Refining Properties
Wichita Falls, Texas.

Atlantic Refining Co.,
Brunswick, Ga.
Philadelphia, Pa.

Barnsdall Refineries, Inc.,
Barnsdall, Okla.,
Okmulgee, Okla.

Beckett Co., Inc.
Duncan, Okla.

Continental Oil Co.,
Artesia, New Mexico.
Denver, Colo.
Ponca City, Okla.
Sapulpa, Okla.
Wichita Falls, Texas.

Deep Rock Oil Co.,
Cushing, Okla.

Eason Oil Co.,
Enid, Okla.

Ellas Refining Co.,
Burkburnett, Texas.

Fairfax Gasoline Co.,
Kansas City, Kans.

Golden Rule Ref. Co.,
Wichita, Kans.

Iowa Park Producing & Ref. Co.,
Wichita Falls, Texas.

Kanotex Refining Co.,
Arkansas City, Kans.

Kendall Refining Co.,
Bradford, Pa.

Lubrite Refining Co.,
E. St. Louis, Ill.

Magnolia Petroleum Co.,
Beaumont, Texas.

Motor Fuel Products Co.,
Amarillo, Texas.

Orient Petroleum Co.,
Wichita Falls, Texas.

Panhandle Refining Co.,
Wichita Falls, Texas.

Phillips Petroleum Co.,
Borger, Texas.

Public Utilities Gas Co.,
Jersey City, N. J.

Pure Oil Co.,
So. Charleston, W. Va.
Cabin Creek, W. Va.
Heath, Ohio.

Quaker State Oil Co.,
Emlenton, Pa.
St. Marys, W. Va.

Residuum Reclamation Corp.,
Kenova, W. Va.

Sinclair Ref. Co.,
Houston, Texas.

Snow Cap Oil Co.,
Sunburst, Mont.

Standard Oil Co. of N. Y.,
Brooklyn, N. Y.

Sun Oil Co.,
Marcus Hook, Pa.
Toledo, Ohio.

Texas Pacific Coal & Oil Co.,
Fort Worth, Texas.

Tri-State Refining Co.,
Kenova, W. Va.

United Refining Co.,
Warren, Pa.

Vacuum Oil Co.,
Paulsboro, N. J.

Vapor Phase Oils, Inc.,
North Bergen, N. J.

Waverly Oil Works,
Coreapolis, Pa.

White Oak Gasoline Co.,
Allen, Okla.

White Star Refining Co.,
Wood River, Ill.
Trenton, Mich.

FOREIGN LICENSEES

Argentine Government Oil Fields,
La Plata, Argentine.

Cia Ferrocarrilera de Petroleo,
Commodoro Rivadavia, Argentine.

Cia Bel du Gaz Catalytique,
Brussels, Belgium.

McColl-Frontenac Oil Co. Ltd.,
Montreal, Can.
Toronto, Ont.

Vacuum Oil Co.,
Dzieditz, Poland.

Societe Anonyme Des Petroles
Au Congo,
Leopoldville, Congo.

Steaua Romana,
Campina, Roumania.

Galicyjzkie Towarzystwo Naftowe
"Galicja" Spolka Akcyjna,
Drohobycz, Poland.

VAPOR PHASE REFINING

A PATENTED PROCESS

The Gray Processes Corporation owns outright or has exclusive licensing rights in its field to more than forty United States patents as well as patents in most foreign countries. The licensing rights include those under the Vapor Phase Refining patents covering treatment of cracked gasoline issued to the Cross Development Company, Atlantic Refining Company, Sinclair Refining Company and others.

That the responsible portion of the petroleum refining industry has acquiesced in the utility of the process and the strength of the patents is attested by the list of Gray licensees on the opposite page.

Infringers will be vigorously prosecuted.

THE GRAY PROCESSES CORPORATION
961-975 FRELINGHUYSEN AVENUE
NEWARK, NEW JERSEY

Refinery Prices First Six Months of 1932 Show Upward Swing for First Time Since 1928

By C. O. WILLSON

For the first time since 1928 prices on refinery products for the first six months of this year pointed upward. The advances did not apply to all areas nor to all products but for the industry as a unit the revenue per barrel of crude oil refined was greater the first half of this year than it was during either of the half-year periods of 1931 and apparently represents a definite upturn after a three-year period of steadily declining prices for the principal refinery products.

The price increases based on averages for the six-month period were not large in the case of any product and, as shown in the accompanying tables, refiners still have a long way to go before they reach the levels considered normal previous to the debacle of 1931 when quotations at refineries were at the lowest levels in the history of the industry. Should refiners be able to maintain the prices in effect at the end of the first six months during the remainder of the year the averages for the last six months will show another increase with the figures for the year substantially higher on several products than they were in 1931.

The most notable recovery in the case of refinery gasolines was in the Mid-Continent Field. The rapid development of the East Texas Field last year was accompanied by the building of several new refineries. This expansion, coupled with the expectation that large quantities of the crude oil would be thrown on the market regardless of the price obtainable, caused a steady decline in the Mid-Continent, gasoline reaching a low of 2⅛ cents in Oklahoma during the late summer. The market recovered for a time in the fall but declined again in December, and at the start of this year the low of the Oklahoma market for U. S. Motor gasoline was 2⅝ cents.

The refineries at that time, through a curtailment of refinery operations backed with a stronger crude oil situation than had been expected, started a laborious effort to bring prices on their principal product in line with refining costs. In April the recovery was made more necessary when a general advance in crude oil quotations developed. Since the start of the year the gasoline prices have fluctuated but the trend on the whole for the first six months was upward and prices at the end of June were near the high point of the year.

The average for the low octane U. S. Motor gasoline in Oklahoma, commonly conceded to be the barometer of the gasoline market for the Mid-Continent and Middle West areas, was 3.81 cents per gallon for the first half year. This compares with an average of 3.35 cents for the first half of 1931, 3.54 cents for the second half, and 3.45 cents for all of 1931. That gasoline prices were still abnormally low the first half year is shown when the average quotations are compared with those in effect in 1930, which previous to 1931 were considered extremely low. The average price for Oklahoma U. S. Motor gasoline the first half of 1930 was 6.88 cents, and for the year 6.34 cents.

The relative prices on gasoline for Oklahoma are representative of the entire Mid-Continent Field. In the remainder of the United States, refinery gasoline quotations in 1931 did not slump to as low levels as they did in the Mid-Continent and for that reason the recovery so far this year has not been so noteworthy. At New York (Bayonne, N. J.) U. S. Motor gasoline brought a weekly average price of 6.05 cents per gallon the first half of this year, which is practically the same as the average for 1931. In 1930 this product brought an average price of 8.07 cents. Since the end of the first half year there have been additional advances in the U. S. Motor gasoline prices at East Coast points.

The export prices on gasoline did not show any material improvement over the latter part of last year. The movement was largely confined to intercompany transactions and long-time contracts and there was so little spot business that prices were nominal over a greater part of the six-month period. A large part of the spot business available went to Rumania and Russian sellers quoting on Gulf Coast basis at prices which at times were less than the Mid-Continent quotations for the same grades.

Natural Gasolines

Price trends in the two areas—Mid-Continent and California—which produce approximately 85 per cent of the natural gasoline in United States, were not the same the first half year. In the Mid-Continent the natural gasoline manufacturers were unable to take advantage of the upturn in refinery gasolines and prices were lower than they were in 1931. The price of 1.9 cents for the first half of 1932 on the 26-70 grade (former Grade AA) was the lowest average of any six-month period in the history of the industry and compares with 2.41 cents the first half of 1931 and 3.6 cents for the last half, which were the previous lows in the history of the natural gasoline business.

The unsatisfactory prices for natural gasolines reflect a changing manufacturing and marketing situation within that branch of the industry which brought so much confusion that the manufacturers were unable to secure quotations in line with the cost of operation. The demand for natural gasoline is rapidly shifting to the low vapor tension grades which are better adapted to the requirements of consumers than is the 26-70 grade which for several years has been the principal product of the several hundred plants located in the Mid-Continent. It is probable that as soon as the industry can adjust itself to the new developments, prices will improve and the normal price relationship to refinery gasolines again established.

In California the price situation for the first half year was better than in the Mid-Continent. The 75-78, 375 grade averaged 4.44 cents the first half year, which compares with an average price of 4.18 cents for 1931 and 7.12 cents for 1930.

Kerosene

Kerosene prices averaged higher the first half year than they did the same period last year with the exception of California where domestic prices were slightly lower. The Mid-Continent also furnished the most important price recovery in the case of kerosene. The statistical situation of kerosene improved over the latter part of 1931 and early in 1932 it became apparent that the supply was not sufficient to readily meet the spring requirements in the Mid-Continent. Prices advanced from a low of 2½ cents in early March to 4¼ cents in late April and early May. At that time, due both to an increased supply and a decreased demand, prices began to slump and reached their lows shortly after the end of the first half year.

The special grades of distillates, such as tractor fuels used as substitutes for kerosene, in general followed the price trends of kerosene for the first half year. However, during the rapid advance in Mid-Continent kerosene prices, the demand for tractor fuels improved due to the fact that prices did not advance as rapidly.

Fuel Oil and Gas Oil

The improvement in prices for the first

AVERAGE PRICES ON REPRESENTATIVE CRUDE OILS AND REFINED PRODUCTS

OKLAHOMA—CRUDE OIL

	1st half 1932	1st half 1931	1931	1930	1929	1928	1927	1926	1925	1924	1923
36 A.P.I. gravity, per bbl.*	$0.86	$0.67	$0.63	$1.23	$1.37	$1.31	$1.38	$2.13	$1.87	$1.63	$1.56

OKLAHOMA—REFINED PRODUCTS

58-60 U. S. Motor gasoline, per gal.	.0381	.0335	.0345	.0634	.0775	.0795	.0667	.1031	.1055	.0896	.0978
Natural gasoline, 26-70, per gal.	.0190	.0241	.03	.0524	.0683	.0734	.0575	†.0946	†.1202	†.0866	†.0913
41-43 water white kerosene, per gal.	.0317	.0262	.0231	.0358	.0517	.0517	.0461	.0727	.0445	.0449	.04
24-26 fuel oil, per bbl.	.3846	.524	.4356	.7043	.706	.7694	.9792	1.3072	1.0908	.954	.9511
32-36 gas oil, per gal. (industrial)	.0122	.0143	.0127	.0227	.0265	.0247	.0299	.0419	.0368	.0291	.0266
200 vis., 3 color, 23-28 cold test neutral oil, per gal.	.0843	.0944	.0924	.1059	.0966	.0947	.1032	.1072	.1139	.1308	.1317
124-26 wax, per lb.	.0169	.0185	.0174	.0216	.0321	.0394	.0294	.0471	.0516	.0446	.0254
150-160 D color bright stock	.1854	.1568	.1631	.2977	.3368	.2310	....	....	....	....	....

PENNSYLVANIA—CRUDE OIL

	1st half 1932	1st half 1931	1931	1930	1929	1928	1927	1926	1925	1924	1923
Crude oil in National Transit Lines, per bbl.	$1.90	$1.77	$1.81	$2.55	$3.69	$2.98	$2.87	$3.51	$3.50	$3.60	$3.33

PENNSYLVANIA—REFINED PRODUCTS

58-60 U. S. Motor gasoline, per gal.	.0511	.0546	.049	.0737	.0905	.0982	.09	.1273	.1348	.1224	.1352
45 water white kerosene, per gal.	.0442	.0444	.04	.0501	.0651	.0635	.0646	.0885	.0656	.0671	.0652
Pennsylvania bright stock, 10-15 pour test, per gal.	.2444	.1784	.2094	.3373	.4745	.3186	.3326	.3954	.3824	.3655	.3337

CALIFORNIA—CRUDE OIL

	1st half 1932	1st half 1931	1931	1930	1929	1928	1927	1926	1925	1924	1923
25 A. P. I. gravity, Long Beach, per bbl.	$0.72	$0.82	$0.76	$1.16	$1.05	$0.96	$1.00	$1.37	$1.35	$1.06	$0.74

CALIFORNIA—REFINED PRODUCTS

58-60 U. S. Motor gasoline, per gal.	.0498	.0481	.0510	.0806	.0849	.0919	.0873	.1134	Average prices on refined products for 1925, 1924 and 1923 on comparable basis not available.
75-78, 375-390 e.p., natural gasoline, per gal.	.0444	.0370	.0418	.0712	.0803	.0726	.093	.1465	
38-40 kerosene, per gal.	.0392	.0436	.0425	.0455	.0569	.0611	.07	.0745	
15-20 fuel oil at tidewater, per bbl.	.5635	.5673	.5836	.6346	.6724	.8892	.9221	.9813	

Based on posted price for Oklahoma, Kansas and North Texas. †Grade A. ‡No octane rating.

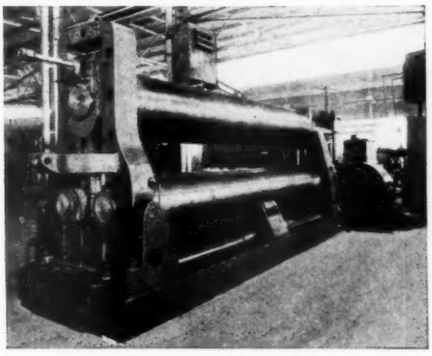
Note—Average prices on refined products are based on low quotations as published weekly in The Oil and Gas Journal. Crude prices are daily averages based on posted schedules of major buyers.

PRODUCTS B S&B SERVICE

Shop Talk

That Talks Back for Your Benefit

The Largest Roll Plate Bending Machine In the Mid-Continent!



WHAT is thought to be the largest set of plate bending rolls in the Mid-Continent field was recently installed in our modern welded pressure vessel plant at Oklahoma City. This powerful machine was especially manufactured for the exacting work of rolling pressure vessels truly round for butt welding. The unusual power of this machine may be realized by the statement that its screw-down mechanism is capable of exerting a downward pressure of 600,000 pounds upon the massive 25-inch diameter, solid forged top roll.

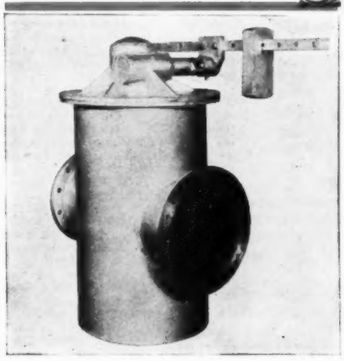
Capable of Bending Boiler Plate 1¾" thick, 36" diameter or larger

IN addition to this machine's capacity and strength, a unique feature is the generous extent to which welding has been used in its own construction. The cradles supporting the middle of the bottom rolls are built up of welded plates. The bearings and housings of the screw-down worm and worm wheels are of welded plate material. Even the main frame consists of rolled steel beams with welded-on side cover plates and welded-in stiffeners. This use of steel plate and structural shapes to form rigid but light frames of heavy machinery represents one of the latest interesting developments in the advance of the art of welding. It has enabled, in this case, the saving of many thousands of pounds of dead weight, and yet has insured increased strength and reliability to this set of heavy rolls, which still weighs more than 100,000 pounds.

"The Weld That Held!"

The purchase of this expensive piece of equipment at this time is evidence of our faith in an increasing demand for high quality, heavy pressure vessels of all kinds that can be made in our plant. With the assurance of accuracy in seams that *fit*, we can truly feature the B. S. & B. FLEXWELDING with its unique process, as "*The Weld that Held*", and are now better equipped than ever for the production of any and all kinds of welded equipment. Let us figure with you on your needs.

BLACK, SIVALLS & BRYSON INC.
OKLAHOMA CITY, OKLA.
AMERICAN TANK & EQUIPMENT CORP.
MANUFACTURING SUBSIDIARY — OKLAHOMA CITY, OKLA



QUITE frequently we are called upon to produce special equipment made to specification. For example, this 14-inch gas valve of the balanced type for use on the gas discharge line of oil and gas separators. This valve handles the gas discharged from one of the big American Oil & Gas separators in the Oklahoma City field. It was fabricated out of steel plate, welded and machined by us completely, from the metal to the finished product.

half year included fuel oil and gas oil in several areas. During the wild period of 1931 Mid-Continent fuel oil sold as low as 5 cents in East Texas and considerable quantities were moved at prices ranging from 15 to 20 cents per barrel. Starting at a low of 22½ cents in January for the low-gravity Oklahoma fuel oil, which covers the bulk of the material available, the price advanced steadily to 32½ cents, the prevailing price at the close of the six months.

The situation in the Atlantic Coast and Gulf Coast areas was not as favorable. In 1931 bunker fuel oil at Bayonne dropped from a high of $1.05 at the start of the year to 60 cents before the close of the period. The price of 60 cents was the lowest in the history of the East Coast refining industry. The first advance materialized late in March and by the end of June, aided by the import tax on imported fuels, the price had advanced to 85 cents. The average of 66.15 cents for the first half year compares with 99.23 cents for the first half of 1931 and $1.09 for the first half of 1930.

Diesel oil prices followed the price trend in coastal fuel oil quotations very closely. At the start of the year the Bayonne price was $1.30 per barrel, a drop of 55 cents from the high of the previous year. Prices had advanced to a high of $1.65 at the close of June, indicating that the average price for the last half year will be much better than the first six months.

The fuel oil market situation in other refining areas for the first six months varied with local conditions. In some sections the competition of cheap gas and coal necessitated the reductions in fuel oil prices in order to obtain new business and in these areas the delivered quotations are lower than they were in 1931.

Lubricants

Mid-Continent and Pennsylvania bright stocks were able to secure higher prices for their products the first six months of this year when compared with the average quotations of last year. In general, prices were also higher on the steam refined stocks for domestic movement. Pennsylvania bright stock of from 10 to 15 pour test brought an average price of 24.44 cents the first six months, an improvement over the 17.84-cent average for the first six months of last year. The Pennsylvania steam refined stock averaged 12.7 cents the first six months, which represented an approximate increase of 50 per cent over the same period last year. The first six months of 1930 Pennsylvania bright stock brought an average price of 39 cents.

In Oklahoma the 150-160 grade of bright stock, zero to 10 grade, averaged 18.54 cents the first six months of this year, which compares with an average of 16.31 cents for 1931. It is worthy of note that for the first six months of 1930 this grade of bright stock brought an average price of 36.6 cents or approximately double the average for the first half of this year.

Neutral oil averages in most refining areas showed little change the first half year. In the Mid-Continent the principal grade, 200-3 color, brought an average low of 8.43 cents, which is less than the 9.21-cent average for 1931. In Pennsylvania the same grade averaged 19.92 cents the first six months, which also is under the 20.31-cent average for the same period last year.

The market for Gulf Coast pale and red oils was not favorable and average prices on all grades the first half year were less than last year. The same situation applied to the California market on neutrals, average prices being exceptionally low for the West Coast operators.

Wax

Prices on paraffin wax in all refining sections were less the first half year than they were the same period last year. The 120-122 grade averaged 2.81 cents per pound the first half year, which was less than the 2.93-cent average for 1931. The 124-126 grade in Oklahoma the first half year brought an average price of 1.69 cents per pound, which compares with 1.74 cents per pound for 1931.

THE OIL AND GAS JOURNAL'S TABLE FOR FIRST HALF OF 1932 GIVING LOW WEEKLY AGE PRICES FOR FIRST SIX MONTHS OF 1932 AND THE YEARS 1931

	January				February				March				
GASOLINES—	5	12	19	26	2	9	16	23	1	8	15	22	29
Oklahoma (Group 3):													
*U. S. Motor	.02⅝	.02⅝	.02¾	.03	.03	.02¾	.02⅞	.02¾	.03	.03¼	.03½	.03¾	.03⅞
60-62 400	.02⅞	.02⅞	.03	.03¼	.03¼	.03	.03⅛	.03	.03⅛	.03⅜	.03⅝	.03⅞	.04
64-66 375	.03⅛	.03⅜	.03⅝	.03¾	.03¾	.03⅝	.03⅝	.03⅝	.03⅝	.03⅜	.03⅞	.03⅞	.04⅛
68-70 350	.03⅞	.03⅞	.04	.04	.04	.03⅞	.03⅞	.03⅞	.03⅞	.04	.04⅛	.04	.04⅜
North Texas:													
*U. S. Motor	.02⅝	.02⅝	.02¾	.03	.03	.02¾	.03	.02⅞	.03	.03¼	.03⅜	.03⅜	.03⅜
64-66 375	.03⅝	.03⅝	.03⅝	.03¾	.03¾	.03⅝	.03⅝	.03⅝	.03⅝	.03¾	.03⅞	.03⅞	.04⅛
†North Louisiana:													
*U. S. Motor	.03¼	.03¼	.03¼	.03½	.03½	.03½	.03½	.03¼	.03⅜	.03¾	.03¾	.03⅞	.04⅛
†Arkansas:													
*U. S. Motor	.03¼	.03¼	.03¼	.03½	.03¼	.03¼	.03¼	.03¼	.03⅜	.03⅜	.03¾	.03⅞	.04⅛
Pennsylvania:													
*U. S. Motor	.04½	.04½	.04½	.04¼	.04	.04	.04	.04	.04	.04	.04	.04	.04¼
64-66 375	.05	.05	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾
California:													
54-56 U. S. Motor	.06	.06	.06	.05½	.05	.04¾	.04½	.04½	.04½	.04½	.04½	.04½	.04⅝
New York (Bayonne, N. J.):													
U. S. Motor, below 65 numbers	.05¾	.05¾	.05¾	.05¾	.05¾	.05¾	.05¾	.05¾	.05½	.05½	.05½	.05½	.05¾
NAPHTHA—													
Oklahoma (Group 3):													
50-52 450 (blending)	.02⅝	.02⅝	.02⅝	.02¾	.02¾	.02¾	.02¾	.02¾	.03	.03¼	.03⅜	.03⅜	.03⅜
Pennsylvania:													
50-54 430-450 (blending)	.04½	.04½	.04¼	.04¼	.04	.04	.04	.04	.04	.04	.04	.04	.04
NATURAL GASOLINES—													
Oklahoma (Group 3)—													
Grade 26-70	.02	.02	.02	.02¼	.02	.01½	.01⅜	.01⅜	.01⅜	.01⅜	.01⅝	.01⅜	.02
California:													
75-78 375	.05¼	.05¼	.05¼	.05¼	.04½	.04½	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼
KEROSENES (WATER WHITE)—													
Oklahoma (Group 3):													
41-43	.02⅜	.02⅜	.02½	.02⅜	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅜
42-44	.02½	.02½	.02⅝	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅞
North Texas:													
41-43	.02⅜	.02⅜	.02½	.02⅝	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅜	.02⅞
Pennsylvania:													
45	.04⅜	.04⅜	.04⅜	.04⅜	.04⅜	.04¼	.04⅛	.04⅛	.04	.04	.04	.04	.04
California:													
38-40	.04½	.04½	.04¼	.04	.04	.04	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾
New York (Bayonne, N. J.):													
‡TRACTOR FUELS—													
Oklahoma (Group 3):													
39-41 prime white	.02	.02	.02⅛	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼
38-40 light straw	.01⅞	.01⅞	.01⅞	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02⅛
Pennsylvania:													
41-43 prime white	.04	.04	.04¼	.04¼	.04¼	.04¼	.04⅛	.04⅛	.03⅞	.03½	.03½	.03½	.03¾
§FURNACE OILS—													
Oklahoma (Group 3):													
32-36 straw	.01⅝	.01⅝	.01¾	.01¾	.01¾	.01¾	.01¾	.02⅝	.01¾	.01¾	.01⅝	.01¾	.01⅝
36-38 straw	.01⅝	.01¾	.01¾	.01⅞	.01⅞	.01⅞	.01⅞	.01⅞	.01⅞	.01⅞	.01⅝	.01¾	.01⅝
38-40 straw	.01⅞	.01⅞	.01⅞	.02	.02	.02	.02	.02	.02	.02	.02	.01⅞	.02
†North Louisiana:													
36-40	.02¼	.02¼	.02⅜	.02½	.02½	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02¼	.02⅜
New York (Bayonne, N. J.):													
36-40	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.04¼	.04½	.04½	.04½	.05
GAS OILS—													
Oklahoma (Group 3):													
32-36, cracking stock	.01⅛	.01⅛	.01¼	.01¼	.01⅛	.01⅛	.01	.01	.01	.01	.01	.01⅛	.01⅛
U. G. I.	.01¼	.01¼	.01¼	.01¼	.01⅛	.01⅛	.01	.01	.01	.01	.01	.01	.01⅛
North Texas:													
32-36 industrial	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛	.01⅛
California:													
30-34, per barrel	.85	.85	.85	.85	.85	.85	.85	.85	.80	.80	.80	.80	.80
Gulf Coast:													
28-30	.02¼	.02¼	.02½	.02⅜	.03⅜	.02½	.02½	.02½	.02¼	.02¼	.02¼	.02¼	.02⅜
FUEL OILS AND DIESEL OILS—													
Oklahoma (Group 3):													
Below 16 gravity	.22½	.22½	.22½	.22½	.20	.20	.22½	.22½	.22½	.22½	.22½	.22½	.22½
24-26	.35	.35	.35	.35	.35	.35	.35	.35	.37½	.37½	.37½	.37½	.37½
28-30	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.47½	.50	.50
North Texas:													
Below 20 gravity	.35	.35	.35	.35	.30	.30	.30	.30	.30	.30	.30	.30	.25
†North Louisiana:													
14-16	.35	.35	.35	.35	.30	.30	.30	.30	.30	.35	.35	.35	.35
California:													
27 plus Diesel	.80	.80	.80	.80	.80	.80	.80	.80	.75	.75	.75	.75	.75
15-19 bunker (at tidewater)	.60	.60	.60	.60	.60	.60	.60	.55	.55	.55	.55	.55	.55
Gulf Coast:													
Bunker C (bulk cargoes)	.40	.40	.40	.40	.40	.40	.40	.40	.38	.38	.38	.38	.38
New York (Bayonne, N. J.):													
Bunker C	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60	.65
28-30 Diesel oil	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
NEUTRAL OILS—													
Oklahoma (Group 3):													
(Zero to 10 cold test)													
180, 3 color	.08	.08	.07¾	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½
200, 3 color	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½	.08½
240, 3 color	.10½	.10½	.10⅝	.09¾	.09¾	.09¾	.09¾	.09¾	.09¾	.09¾	.09¾	.09¾	.09¾
(15-30 cold test)													
200, 3 color	.08¾	.08¾	.08¼	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¼	.07¾
Pennsylvania:													
(Viscosity at 70° F.)													
200, 3 color, 10 pour test	.19	.19	.19	.18	.18	.18	.18	.18	.18	.18½	.18½	.21½	.21½
Gulf Coast:													
200, 3 pale oil	.07	.07	.07	.07	.07	.07	.07	.07	.06	.06	.06	.06	.06½
200, 5-6 red oil	.06	.06	.06	.06	.06	.06	.06	.06	.05	.05	.05	.05	.05
California:													
200, 2½-3 pale	.09¼	.09¼	.09¼	.09¼	.09¼	.09¼	.09¼	.08	.08	.08	.08	.08	.08
200, 4½-5 red	.09¾	.09¾	.09¾	.09¼	.09¼	.09¼	.09¾	.08	.08	.08	.08	.08	.08
BRIGHT AND STEAM REFINED STOCKS—													
Oklahoma (Group 3):													
150-160, zero to 10	.17½	.17½	.17½	.16½	.16½	.16½	.16	.16	.15½	.15½	.15½	.16	.17⅝
600 light green S.R.	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Pennsylvania:													
600 S.R.	.11	.11	.11	.11	.11	.11	.11	.11	.13	.13½	.13½	.13½	.13½
Bright Stock, 10-15 pour test	.19	.19	.19	.19	.20	.21	.23	.23	.25	.25	.25	.25	.25
WAX—													
Oklahoma:													
124-126	.01⅝	.01⅝	.01⅝	.01⅝	.01⅝	.01⅝	.01⅝	.01¾	.01¾	.01¾	.01¾	.01¾	.01⅝
New York (Bayonne, N. J.):													
120-122	.02⅝	.02¾	.02¾	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅝	.02⅞	.02⅞
EXPORT PRICES													
GASOLINE—													
Gulf Coast:													
U. S. Motor	.04¾	.04½	.04½	.04½	.04½	.04½	.04½	.04½	.04⅛	.04⅛	.04⅛	.04	.04⅛
64-66 375	.04⅞	.04⅝	.04⅝	.04¾	.04¾	.04¾	.04¾	.04⅝	.04⅜	.04⅜	.04⅜	.04⅛	.04½
Los Angeles, Calif.:													
U. S. Motor, 53-55 gravity	.04¼	.04	.04	.04	.04	.04	.04	.04	.03¾	.03¾	.03¾	.03¾	.03¾
U. S. Motor, 65 octane number	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
KEROSENE—													
Gulf Coast:													
41-43 prime white	.04	.04	.04¼	.04¼	.04½	.04½	.04¼	.04¼	.04	.04	.04	.04	.04
41-43 water white	.04¼	.04¼	.04½	.04½	.04½	.04½	.04½	.04½	.04¼	.04¼	.04¼	.04¼	.04¼
Los Angeles, Calif.:													
41-43 water white	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
LUBRICANTS—													
New York (Bayonne, N. J.):													
600 S.R. in barrels	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19	.20	.21	.21
600, Pennsylvania Flash	.24	.24	.24	.24	.24	.23	.23	.23	.23	.23	.24	.24½	.24½
140-150 Bright Stocks (light)	.29	.29	.27	.27	.27	.27	.27	.28	.28	.28	.29	.30	.30
140-150 Bright Stocks (dark)	.28	.28	.26	.26	.26	.26	.26	.27	.27	.27	.28	.29	.29

*Octane Ratings—The quotations cover price ranges on gasolines in which no octane rating is given. In the case of U. S. Motor gasoline and 60-62 400 endpoint gasoline price differentials based on 57-65 octane and 65 and above octane are given in weekly quotations. The premium for 57-65 octane varied the first six months, from one-fourth to five-eighths cent over products in which no octane rating was guaranteed. In the case of 65 and above octane, the premium varied from one-half to three-fourths cent.

QUOTATIONS ON REPRESENTATIVE REFINED PRODUCTS FOR EXPORT AND DOMESTIC MOVEMENT. INCLUDES AVERAGES 1931 AND 1930. PRICES GIVEN IN CENTS PER GALLON F.O.B. REFINERIES, UNLESS OTHERWISE NOTED.

April				May					June				1st half 1932			1931				1930			
5	12	19	26	3	10	17	24	31	7	14	21	28	Av. price	High	Low	Av. pr. for yr.	High	Low	Av. price 1st 6 mos.	Av. price 2nd 6 mos.	Av. pr. for yr.	High	Low	Av. price 1st 6 mos	Av. price 2nd 6 mos.
.04½	.04½	.04⅞	.04¾	.04⅝	.04⅝	.04⅝	.04¼	.04¼	.04½	.05	.04⅞	.04¾	.0381	.05	.02⅝	.0345	.05	.02⅛	.0335	.0354	.0634	.075	.04	.0688	.0584
.04⅝	.04⅝	.05	.04⅞	.04⅞	.04¾	.04½	.04⅝	.04⅝	.04⅝	.05⅛	.05⅞	.05	.0399	.05⅛	.02⅞	.0366	.05⅛	.02⅝	.0357	.0376	.0674	.0775	.04¼	.0721	.0631
.04½	.04⅝	.05¼	.05⅛	.05	.05	.04⅝	.04⅝	.04⅝	.04⅞	.05¼	.05¼	.05¼	.0434	.05¼	.03⅝	.0399	.05⅝	.02¾	.0392	.0406	.0704	.0812	.04⅝	.0767	.0646
.04⅝	.05	.05¼	.05¼	.05¼	.05⅛	.04⅞	.04⅞	.04¾	.05	.05⅝	.05⅝	.05⅝	.0451	.05⅝	.03¾	.0420	.05⅛	.02⅞	.0422	.0418	.0707	.08⅛	.05	.0771	.0647
.04	.04⅝	.04⅝	.04⅝	.04⅞	.04½	.04¼	.04¼	.04¼	.04⅜	.04⅞	.04¾	.04⅝	.0374	.04⅞	.02⅝	.0330	.05	.02⅛	.0314	.0346	.0572	.07	.04	.0627	.0521
.04½	.04⅜	.05⅛	.05	.05	.04⅝	.04⅝	.04½	.04½	.04⅜	.05¼	05⅛	.05	.0429	.05¼	.03⅝	.0397	.05⅝	.02⅝	.0389	.0404	.0658	.07⅝	.04⅜	.0726	.0594
.04⅝	.05	.05¼	.05¼	.05¼	.05¼	.05¼	.04⅞	.04⅞	.05	.05½	.05½	.05¼	.0434	.05½	.03⅛	.0389	.0514	.02⅝	.0379	.0399	.0675	.07⅜	.04⅜	.0713	.0639
.04¾	.05	.05¼	.05¼	.05¼	.05¼	.05¼	.04⅞	.04⅞	.05	.05½	.05½	.05½	.0431	.05½	.03¼	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.04⅝	.04⅜	.05¼	.06	.06	.06⅜	.06½	.06½	.06½	.06½	.06⅜	.06½	.06½	.0511	.06⅜	.04	.0490	.06¼	.04¼	.0546	.0434	.0737	.08¼	.06¼	.078	.0697
.05	.05	.05½	.06⅜	.06⅜	.06⅜	.06⅜	.06⅜	.06⅜	.06⅜	.07	.06⅜	.06⅜	.0556	.07	.04⅜	.0575	.07	.05	.0608	.0543	.0808	.09	.07	.0841	.0777
.04½	.04½	.05½	.05⅜	.05⅝	.05½	.05	.04⅜	.04⅜	.04¼	.04¼	.04¼	.06	.0498	.06	.04¼	.0510	.08½	.03	.0481	.0538	.0806	.09½	.06½	.0806	.0806
.05⅜	.05⅜	.06¼	.06¼	.06¼	.06⅜	.06½	.06½	.06⅜	.06⅜	.06⅜	.06⅜	.06½	.0605	.06⅜	.05½	.0604	.07	.05⅛	.0644	.0564	.0807	.09	.06¼	.0864	.0755
.03⅞	.04½	.04⅜	.04⅜	.04⅜	.04⅜	.04¼	.04¼	.04¼	.04½	.04⅞	.04⅜	.04½	.0503	.04⅞	.02⅝	.0336	.04½	.02¼	.0336	.0336	.0591	.07	.04½	.0648	.0538
.04¼	.04¼	.04¼	.04½	.05⅛	.05¼	.05⅜	.06	.05⅞	.05⅞	.06	.05⅞	.05⅞	.0471	.06	.04	.0490	.06	.04	.0535	.0446	.0703	.07¾	.06	.0733	.0675
.02⅛	.02¼	.02¼	.02⅛	.02⅛	.02	.01⅞	.01⅞	.01⅝	.01⅜	.02¼	.02⅛	.02¼	.0190	.02¼	.01⅜	.0300	.05	.01⅝	.0241	.036	.0524	.06½	.03	.0572	.0481
.04¼	.04¼	.04½	.04½	.04½	.04½	.04½	.04½	.04½	.04½	.03¾	.03¾	.03¾	.0444	.05¼	.03⅜	.0418	.05⅞	.01⅜	.0370	.0466	.0712	.08½	.05⅜	.0753	.0675
.03⅛	.03½	.03⅞	.04¼	.04¼	.04¼	.04	.03⅜	.03½	.03¼	.03½	.03	.02⅜	.0317	.04⅛	.02⅜	.0231	.03	.01⅜	.0262	.02	.0358	.04⅛	.03	.0406	.0314
.03⅝	.03⅜	.04¼	.04½	.04⅜	.04⅜	.04⅛	.04	.03⅝	.03½	.03¼	.03	.03⅛	.0325	.04½	.02½	.0249	.03⅛	.02	.0281	.0216	.0390	.04⅝	.03¼	.044	.0341
.03⅛	.03⅝	.03⅞	.04⅛	.04⅛	.04⅛	.04	.03⅞	.03½	.03⅜	.03⅛	.03	.02½	.0314	.04⅛	.02⅜	.0215	03	.01⅜	.0255	.0195	.0348	.04⅛	.03	.0394	.0305
.04	.04	.04⅛	.04⅜	.04⅝	.03⅝	.05	.05	.05	.05	.04⅞	.04⅞	.04⅞	.0442	.05	.04	.0410	.05⅛	.03½	.0453	.0366	.0526	.06	.04¼	.0568	.0487
.03⅜	.03⅜	.03⅜	.04	.04	.04	.04	.04	.04	.04	.03⅜	.03⅜	.03⅜	.0392	.04½	.03⅜	.0425	.05	.03⅛	.0436	.0413	.0455	.05	.04	.0416	.0463
.02⅜	.02⅜	.02½	.02½	.02½	.02½	.02⅜	.02⅜	02⅜	.02⅜	.02⅛	.32⅛	.02⅛	.0229	.02⅜	.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.02⅛	.02⅛	.02⅜	.02⅜	.02⅛	.02⅛	.02⅛	.02⅛	.02⅛	.02⅛	.02	.02	.01⅞	.0207	.02⅜	.01⅞	.0185	.02¾	.01¼	.0220	.015	.0294	.03⅜	.02⅜	.0313	.0275
.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.0398	.04¼	.03½	.. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....
.02	.02	.02	.02	.01⅞	.02⅞	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.0179	.02	.01⅝	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
.02	.02	.02	.02	.02	.02	.01⅞	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.0185	.02	.01⅜	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
.02⅛	.02⅛	.02⅛	.02⅛	.02⅛	.02⅛	.02	.01⅞	.01⅞	.01⅞	.01⅞	.01⅞	.01⅞	.0198	.02⅛	.01⅜	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
.02½	.02½	.02½	.02½	.02½	.02½	.02½	02⅜	.02⅜	.02¼	.02¼	.02¼	.02¼	.0235	.02½	.02¼	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.0453	.05	.03¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.0124	.01⅜	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.01¼	.01¼	.01¼	.01⅜	.01⅜	.01⅜	.01⅜	.01¼	.01⅜	.01⅜	.01⅜	.01⅜	.01⅜	.0122	.01⅜	.01	.0127	.02	.00⅝	.0143	.0111	.0227	.02⅞	.02	.0245	.0211
.01¼	.01¼	.01¼	.01¼	.01¼	.01⅜	.01¼	01¼	01¼	.01¼	.01¼	.01¼	.01¼	.0110	.01⅜	.01⅛	.0118	.02	.00⅜	.0137	.0099	.0215	.02⅞	.02	.0231	.0201
.80	.75	.75	.75	.75	.75	.70	.65	.65	.65	.65	.65	.70	.7692	.85	.65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.02⅜	.02⅞	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.0269	.03	.02¼	.0259	.03⅛	.02⅛	.0292	.0226	.0375	.04	.03½	.0381	.0370
.25	.25	.25	.27½	.27½	.30	.32½	.32½	.32½	.32½	.32½	.32½	.32½	.2596	.32½	.20	.2904	.42½	.20	.3510	.2298	.5225	.70	.40	.613	438
.37½	.37½	.37½	.40	.40	.42½	.42½	.42½	.42½	.42½	.42½	.42½	.42½	.3846	.42½	.35	.4356	.65	.30	.5240	.3471	.7043	.90	.55	.792	.623
.50	.50	.50	.52½	.52½	.52½	.52½	.50	.50	.50	.52½	.52½	.52½	.0487	.52½	.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.25	.25	.25	.27½	.27½	.30	.35	.35	.35	.35	.35	.35	.35	.3115	.35	.25	.2663	.40	.15	.2740	.2587	.4649	.65	.30	.547	.39
.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.3404	.35	.30	.5183	.70	.35	.6135	.4230	.0782	.85	.70	.80	.76
.75	.75	.75	.75	.75	.75	.70	.75	.70	.70	.70	.70	.70	.7538	.80	.70	.7510	.80	.70	.7462	.7558	.8365	.90	.75	.85	.82
.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.5635	.60	.55	.5836	.60	.55	.5673	.60	.6346	.70	.55	.65	.62
.45	.45	.45	.45	.45	.45	.48	.50	.50	.50	.50	.50	.55	.4358	.55	.38	.5404	.65	.40	.6346	.4462	.7130	.80	.62½	.714	.712
.65	.65	.65	.65	.65	.65	.75	.75	.75	.75	.75	.85	.85	.6615	.85	.60	.8346	1.05	.60	.9923	.6769	1.0919	1.15	1.05	1.094	1.09
1.30	1.30	1.30	1.30	1.30	1.30	1.40	1.40	1.40	1.50	1.50	1 65	1.65	1 3538	1.65	1 30	1.5673	1 85	1.30	1.7538	1.3808	1.9913	2.00	1.85	2.00	1.98
.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.07½	.0755	.08	.07½	.0798	.08½	.07½	.0831	.0764	.0927	.10	.08½	.0986	.0872
.08½	.08½	.08½	.08½	.08½	.08½	.08¼	.08½	.08¼	.08¼	.08¼	.08¼	.08¼	.0843	.08½	.08¼	.0921	.09⅜	.08½	.0944	.0898	.1059	.11½	.09⅜	.111	.1012
.09⅜	.09⅜	.09¼	.09¼	.09⅜	.09⅜	.09⅜	.09⅜	.09¼	.09¼	.09⅜	.09⅜	.09⅜	.0971	.10½	.09¼	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.0785	.08¾	.07¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.21	.21	.21	.21	.21	21	.21	.21	.21	.21	.21	.21	.21	.1992	.21	.18	.2031	.22½	.17¼	.2007	.2056	.2111	.25½	.16½	.246	.1787
.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.06½	.0658	.07	.06	.0775	.08¼	.07	.0807	.0743	.0912	.09½	.08¼	.0922	.0901
.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.0531	.06	.05	.0699	.07⅛	.06	.0731	.0666	.0829	.08¾	.07	.0831	.0828
.08	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.0822	.09¼	.07¾	.0950	.10	.09	.0988	.0912	.1074	.11½	.10	.11	.1050
.08	.07¾	.07¾	.07¾	.07¾	.07¾	.07¾	.07	.07	.07	.07	.07	.07	.0812	.09¾	.07	.0956	.09¾	.04½	.0950	.0962	.1063	.11	.09½	.11	.1028
.17⅜	19¾	.19¾	19¾	.20¾	.20¾	.20¾	.20¾	.20¾	.21	.22	.22	.22	.1854	.22	.15½	.1631	.19½	.12½	.1568	.1692	.2977	.37	.18	.366	.23
.04	.04½	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.0444	.05	.04	.0486	.07	.04	.0550	.0420	.0831	.10	.07	.09	.0767
.12⅜	.12⅜	.12½	.12½	.13	.13⅜	.14	.14	.14	.14	.14	.14	.14	.1270	.14	.11	.1014	.14¼	.07½	.0825	.1203	.1591	.24	.09	.218	.1045
.25	.25	.25	.26	.26	.27½	.27½	.27½	.27½	.27½	.27½	.27½	.28	.2444	.28	.19	.2094	.29	.16¼	.1784	.2405	.3073	.43	.19	39	.23
.01¾	.01¾	.01¾	.01¾	.01¾	.01¾	.01¾	.01⅝	.01⅝	.01⅝	.01⅝	.01⅞	.01⅝	.0169	.01¾	.01⅝	.0174	.02	.01½	.0185	.0162	.0216	.02¾	.01¾	.0234	.0199
.02⅞	.02⅞	.02⅞	.02⅜	.02¾	.02¾	.02¾	.02¾	.02½	.02½	.02½	.02½	.02½	.0281	.02⅞	.02½	.0293	.03	.02⅜	.0297	.0288	.0326	.03⅜	.02⅜	.0358	.0296
.04¼	.04½	.05	.05	.05	.05	.05	.05	.04½	.04½	.04½	.04½	.04½	.0454	.05	.04	.0430	.05¼	.03½	.0453	.0406	.0751	.08½	.05⅛	.0816	.0691
.04⅛	.04⅝	.05½	.05½	.05½	.05½	.05½	.05½	.05	.05	.05	.05	.05	.0488	.05½	.04¼	.0497	.06⅛	.03⅜	.0542	.0452	.0888	.10	.06	.0958	.0826
.03¾	.03¾	.04	.04	.04	.04	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.0387	.04¼	.03¾	.0438	.07	.03¼	.0451	.0425	.0633	.06¾	.04¾	.0624	.0631
.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.0500	.05	.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.04	.04¼	.04¼	.04¼	.04⅛	.04⅜	.04⅜	.04⅜	.04⅜	.04⅜	.04⅜	.04⅜	.04⅜	.0421	.04⅜	.04	.0371	.04¼	.03¼	.0409	.0349	.0588	.07	.04	.0632	.0547
.04⅛	.04½	.04⅜	.04⅜	.04⅜	.04½	.04½	.04½	.04½	.04½	.04½	.04½	.04½	.0441	.04½	.04¼	.0424	.05¼	.03½	.0499	.0372	.0668	.08	.05	.073	.0610
.04	.04	.04	.04	.04	.04	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.03¾	.0393	.04	.03¾	.0386	.04¾	.03½	.0448	.0309	.0417	.04¾	.03¾	.0407	.0427
.21	.21	.21	.21	.21	.21	.21	.21	.21½	.21½	.22	.22	.22	.2035	.22	.19	.1783	.22	.15½	.1624	.1925	.236	.31½	.16½	.303	.1746
.24½	.24½	.23	.23	.23	.23	.24	.24	.25	.25	.25½	.25½	.25½	.2398	.25½	.23	.2229	.26½	.19½	.2098	2360	.3267	.40	.23½	.49	.2681
.30	.30	.29	.29	.29	.31	.30½	.30½	.31	.31	.32	.32	.33	.2935	.33	.27	.2803	.35½	.24¼	.2535	.3071	.3935	.52	.26	.4812	.30
.29	.29	.28	.28	.28	.30	.29	.29	.29½	.29½	.30	.30	.31	.2819	.31	.26	.....	.....	.....	...	.....	.....	...	.....	.....	.....

†For Arkansas, Louisiana and Mississippi delivery.
‡There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less and .2 per cent sulphur.
§Prices for furnace oils are for zero cold test grades under 190° F. flash and good odor.

Average Gasoline Prices at Filling Station Have Consistently Improved During Past Year

By W. T. ZIEGENHAIN

Average retail gasoline prices in 50 cities scattered over the United States have shown a gradual but consistent advance for the past year and the upward trend has been sustained over a longer period than at any time in recent years. The rise has been so gradual it has gone almost unnoticed but a review of the accompanying graph showing the trend of these prices over the past seven years yields a convincing fact.

The advance in the average filling station price, which is also figured free of taxes has not been large considering the total decline since the peak of 1926 but any improvement is welcome during a year in which the trend of commodity prices has been downward.

Compared to the peak 1926 price of 22.2 cents the July 1 average price of 14.2 cents represents a decline of 8 cents but the latter compared to the lowest average which is shown for June 1, 1931, represents an increase of 2 cents.

With the months of high consumption just ahead and with refinery operations and crude production under much better control than at any time within the past five years it is entirely within reason to predict a continued slow improvement in average retail prices throughout 1932 despite bad general economic conditions. Rather than base such views entirely upon statistics marketers have chosen to refer to the growing recognition of the fact that the "oil business has had its spree and has settled down to doing business at a profit."

Trend of Prices by Sections

Of the various sections of the country in which a study had been made of price trends for the first six months of 1932 the southeastern states and the midwestern states seem to have shown the greatest recovery. The southeastern section shows the greatest improvement, the average station price free of taxes increasing from 11.8 cents on January 1 to 14.1 cents July 1. Part of this increase was wiped out on July 2 however, when the Standard Oil Co. of Louisiana reduced its tank wagon and station prices 2 cents throughout its territory.

Although reference here is made to the large improvement in prices that have occurred in the southeastern states, it is also true that prices there have been abnormally low and the advance has done no more than to bring the average up more nearly to that of the entire country.

The average net price showed an improvement in every section, the least improvement being shown in the Atlantic and New England states, where the average remains below the average for the country.

The comparison of average prices by states, however, is not accurately revealed in these figures as a basis for judging the revenue to the respective companies marketing therein. The great difference in freight rates, concentration of population and weather act as equallizing factors. So, except for pointing to changes within a given area as a basis for estimating the relative income of a company from one period to another, the comparison could be misleading and likewise, it is not reasonable to judge the relative earnings of the marketers in one section with those of another by using average prices alone.

Average Price Over Country

The average price change shown for the country as a whole serves to indicate the oil industry's revenue in the same relative manner and with the same qualifying limitations as those applicable to the sections. In general, however, it may be said that the daily revenue to oil marketing companies has increased in total in the United States by about $1,000,000 a day during July of this year over that of a year ago as a result of the better prices.

This applies to gasoline only and is based upon the change of price shown on the regular grade of gasoline. In those instances where the percentage of regular gasoline sold has declined in favor of a larger sale of third grade or where the higher price received for the premium grade ceases to offset the subnormal price on the third grade, the improvement in the total revenue will be correspondingly less.

In most instances gallonage has moved from the premium grade to the regular grade and from the regular grade to the third grade. This has been due principally to two factors, namely the improvement in quality in both the regular and low priced grades and to depressed economic conditions. The premium grades of gasoline have also been improved in quality but the benefits from using the premium grade are waived by many motorists who continue to drive old cars having a relatively low compression ratio.

Trackage Stations

For the past three years considerable concern was placed in the question of the success of trackage stations. Many of them have been built in all sections and continue in business. There is not the willingness to go the limit in price reductions to gain gallonage either at these stations or in competitive stations that there was when this type first entered the business and on the other hand, the integrated companies which were most concerned feel they have a forceful tool to meet all such competition in the third grade of gasoline.

This third grade has proved so popular in some sections as to bring its sales ahead of the regular and a continuation of this would lead to the prediction that companies will favor returning to the two grade standard, allowing the third grade to replace the regular grade by abandoning the characteristic blue color and adopting a price between the present regular and the third grade.

Gasoline Taxes

During the past year there has been a lull in state tax increases but this was more than made up in the 1-cent Federal tax placed upon motor fuel July 1. This tax together with a one-half cent advance made in New York June 1 and a 1-cent advance in tax effective in New York on March 1 brought the average tax over the United States up to 5.14 cents on July 1. Assuming that the domestic gaso-

TREND OF GASOLINE SERVICE STATION PRICES

AVERAGE SERVICE STATION PRICES IN CENTS IN 50 REPRESENTATIVE CITIES, EXCLUSIVE OF TAXES

	1924	1925	1926	1927	1928	1929	1930	1931	1932
January 1	16.89	16.45	18.82	20.25	16.41	18.32	17.23	14.56	12.87
February 1	20.20	19.37	18.91	20.16	16.38	17.59	16.96	14.83	12.97
March 1	20.67	21.70	19.89	19.63	16.80	17.21	16.28	14.86	12.91
April 1	21.45	21.30	21.14	18.79	17.16	17.38	15.92	13.68	13.18
May 1	21.48	20.99	21.13	17.97	17.47	17.48	16.95	12.40	13.59
June 1	21.28	20.74	22.13	17.25	17.56	18.32	17.01	12.21	13.68
July 1	20.42	21.99	22.22	17.38	17.56	18.48	16.56	12.46	14.21
August 1	19.10	22.02	22.18	17.39	18.12	18.22	16.47	12.41	.....
September 1	18.45	19.45	22.09	17.13	18.40	18.22	16.26	12.21	.....
October 1	16.52	18.41	21.58	16.81	18.70	18.32	15.93	12.34	.....
November 1	16.29	18.20	20.58	16.72	18.05	17.84	15.41	12.32	.....
December 1	16.41	18.45	20.10	16.71	18.39	17.51	14.96	12.89	.....
Average	19.10	19.92	20.92	18.01	17.63	17.91	16.33	13.09	.....

COMPARISON OF NET SERVICE STATION PRICES JANUARY 1 AND JULY 1, 1932, ACCORDING TO GEOGRAPHIC GROUPINGS

Atlantic and New England States

	Jan. 1	July 1
Augusta, Me.	14.8	14.3
Manchester, N. H.	14.4	14.0
Burlington, Vt.	15.3	15.0
Hartford, Conn.	15.5	14.5
Springfield, Mass.	12.5	14.5
New York, N. Y.	12.3	9.5
Philadelphia, Pa.	12.0	13.5
Providence, R. I.	10.5	12.5
Newark, N. J.	12.7	13.2
Baltimore, Md.	12.4	13.9
Dover, Del.	13.0	14.0
Average	13.2	13.5

Central

	Jan. 1	July 1
Fargo, N. D.	14.9	16.1
Huron, S. D.	13.4	14.5
Wichita, Kans.	10.8	12.0
Omaha, Neb.	11.9	12.9
Tulsa, Okla.	11.0	13.0
Dallas, Tex.	12.0	13.0
Little Rock, Ark.	12.0	12.0
Kansas City, Mo.	11.9	13.1
Des Moines, Iowa	12.4	13.4
Duluth, Minn.	13.5	14.7
Milwaukee, Wis.	12.1	13.3
Chicago, Ill.	12.0	13.1
Detroit, Mich.	11.5	9.6
Indianapolis, Ind.	12.4	13.4
Cleveland, Ohio	14.0	14.0
Average	12.4	13.2

Southeastern

	Jan. 1	July 1
Norfolk, Va.	12.5	14.0
Charleston, W. Va.	14.7	15.3
Louisville, Ky.	12.0	12.0
Memphis, Tenn.	10.5	14.5
Atlanta, Ga.	13.0	15.0
Charlotte, N. C.	11.0	16.2
Charleston, S. C.	12.5	14.0
Natchez, Miss.	10.0	13.0
Birmingham, Ala.	13.0	14.0
New Orleans, La.	8.5	14.0
Jacksonville, Fla.	13.0	13.0
Average	11.8	14.1

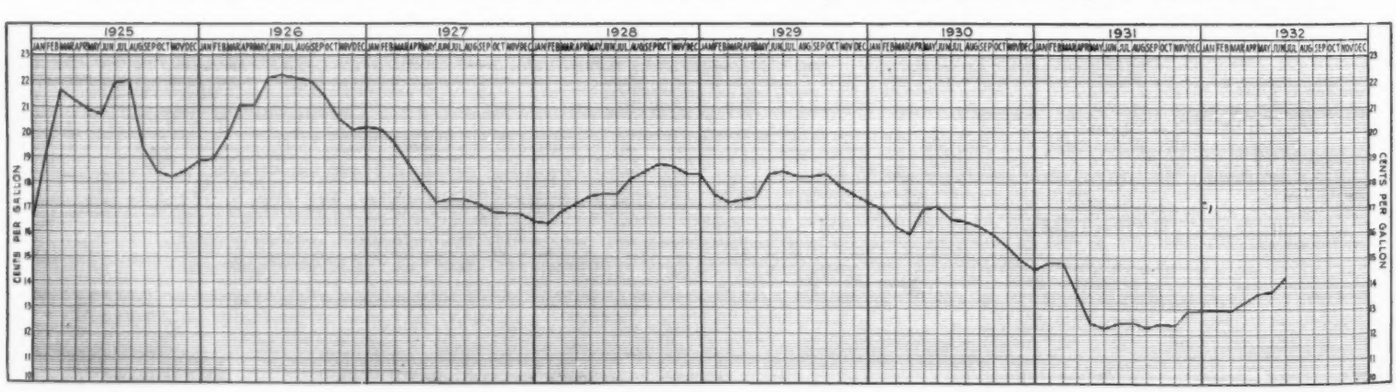
Midwestern

	Jan. 1	July 1
Helena, Mont.	19.0	19.0
Boise, Idaho	19.0	20.5
Casper, Wyo.	14.0	15.0
Reno, Nev.	16.0	19.0
Salt Lake City, Utah	16.5	19.0
Denver, Colo.	11.0	16.0
Phoenix, Ariz.	12.0	15.5
Albuquerque, N. Mex	15.0	14.0
Average	15.3	17.3

Western Coast

	Jan. 1	July 1
San Francisco, Calif.	13.5	14.0
Portland, Ore.	14.0	15.0
Seattle, Wash.	14.0	15.0
Average	13.8	14.7

Trend of Gasoline Service Station Prices, Exclusive of Taxes, in 50 Representative Cities Throughout the United States



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line consumption averages 1,100,000 bbls. of gasoline daily, which is below the average of last year, the daily tax bill on gasoline will exceed $2,000,000 daily. The 1-cent Federal tax accounts for approximately $460,000 of this. In addition, the American motorist is paying a tax on lubricating oils, car registration, a property tax and special levies for the maintenance of sea walls, bridges, flood control and for weak schools that brings the total cost to the motorist in excess of $3,000,000 daily.

Tax Evasion

The immensity of the tax burden placed upon the motorist is not fully realized because he pays this tax a little at a time and to several agencies. The only general discussion of the gasoline tax question came with the adoption of the 1-cent Federal tax on July 21 when refiners and blenders were told to pay 1 cent tax on every gallon of gasoline sold for motor fuel consumption. This brought the average tax per gallon above 5 cents. The present price of gasoline at the refinery in most parts of the United States does not equal this tax and obviously any chance to evade its payment offers huge profits.

The large manufacturers must operate on a system which provides for the payment of tax on every gallon of gasoline for it would be more difficult to work out a system designed to evade the tax than it would be worth, regardless of the scruples of the management. This is not the case where the management is in the hands of very few people who are intent upon evading the law for profit. That tax evasion exists has been recognized repeatedly in all sections but it has been extremely difficult to convict the offender. State officers have been accused of being lax in some instances while in other instances collusion between the operating parties and the local officers has been cited. There is, however, a closer working arrangement under development and with the aid of Federal agents it is hoped that tax evasion will be minimized.

Those refiners or marketers who must operate with "bootleg" gasoline are at a decided disadvantage in these days of high marketing costs and low profit margins. The result has been a string of profitless stations through practically all of the country. Short-sighted politicians have been hesitant in recognizing the seriousness of this condition and say that to eliminate tax evasion would mean high gasoline prices to the public. The absurdity of this statement is seen by applying such practices to business in general. If racketeering is to be made an instrument for forcing low prices in the sale of gasoline it may be done in the sale of every taxable commodity and if the development went to the extreme business in general would be forced to approach a standstill.

GASOLINE SERVICE STATION PRICES IN EFFECT FIRST SIX MONTHS OF 1932, EXCLUSIVE OF TAXES, IN 50 REPRESENTATIVE CITIES WITH AMOUNT AND DATE OF CHANGES, ALSO HIGH AND LOW PRICES FOR 1931, AND FIRST SIX MONTHS OF 1932, WITH GASOLINE TAXES IN EFFECT JANUARY 1, 1931, 1932 AND JULY 1, 1932.

	Prices Jan. 1, 1932	Price changes in first 6 months of 1932																Price July 1	High and low prices				Federal and state taxes		
		January		February		March			April			May		June				1931		First 6 mos. 1932		Jan. 1, 1931	Jan. 1, 1932	July 1, 1932
Birmingham, Ala.	13 0	1/2	14.5						4/20	4/28		5/20		6/3	6/30			15 0	17.0	9 0	13.0	15 5	*4.0	*6.0	*7.0
									15 8	15.5		13 0		14.0	15.0										
Phoenix, Ariz.	12 0													6/24	6/27										
Little Rock, Ark.	12.0			2/15	2/15	3/24			4/7	4/14		5/9	5/23	6/16	6/18			15.5	19 5	10.5	12 0	15.5	4 0	5 0	6 0
				10 5	11.5	12 0			12.5	13.0		13 5	13.0	11.0	12 0			12.0	16.5	10.0	10 5	13.5	5 0	6 0	7 0
San Francisco, Calif.	13 5								4/9					6/27											
									11.5					14.0				14 0	18 0	8 0	11.5	14 0	3 0	3 0	4.0
Denver, Colo.	11.0					3/1			4/4	4/14	5/11							16.0	15 0	10.0	11 0	16 0	4.0	4.0	5 0
						13.0			14 0	15.0	16 0														
Hartford, Conn.	15 5	1/19	13 5			3/25			4/16									14.5	17.5	12 0	13.5	15.5	2 0	2 0	3.0
						14 0			14 5																
Dover, Del.	13 0					3/28								6/27											
						14.0								14.5				14.0	16 0	12 0	13.0	14.5	3 0	3.0	4.0
Jacksonville, Fla.	13.0	1/14	12 0	2/29					4/9	4/20	4/28	5/3		6/30											
		1/9		13.0					11.0	11 5	12.0	13 0		12.0				12 0	15.0	9 0	11.0	13 0	6 0	7 0	8.0
Atlanta, Ga.	13.0	1/9	13 5						4/1	4/20	4/28	5/28		6/30											
									15.0	15.5	16 0	15 0		16 0				16.0	16.0	8.0	13 0	16.0	6.0	6 0	7.0
Boise, Idaho	19 0								4/1	4/1				6 14	6/28										
		1/6							16 0	15 0				19 0	20.5			20.5	20.5	16.0	15 0	19 0	5.0	5.0	6 0
Peoria, Ill.	11 0	12.5							4/15					6/21											
									13 5					13 6				13.6	14 4	11.0	11 0	13 6	3 0	3.0	4.0
Chicago, Ill.	12 0								4/15					6/21											
									13 0					13 1				13.1	14 0	8 0	12.0	13.1	3 0	3.0	4.0
Indianapolis, Ind.	12.4					3/16			4/15					6/21											
		1/23				12.3			13 3					13 4				13.4	13.9	11.3	12 4	13.4	4 0	4.0	5.0
Des Moines, Iowa	10 0	12 6							4/15					6/21											
									13.6					13.7				13.7	14.5	9 9	10 0	13.7	3.0	3 0	4 0
Wichita, Kans.	10 8								4/15	4/22				6/21											
		1/19				3/25			10 9	11 9				12.0				12 0	10 8	9.8	10 8	12 0	3 0	3.0	4.0
Louisville, Ky	12.0	11.0				12.5			4/1	4/20	4/28	4/29													
		1/6		2/5		*3/24	3/29		11 5	12 0	12 5	12 0						12.0	13 0	11 0	11.0	12 5	5.0	5.0	6.0
New Orleans, La.	8 5	9.5		10 0		10 5	11 5		4/8	4/14	5/9	5/23		6/18											
						3/25			12 5	13.0	13.5	13 0		14.0				14 0	13 5	8.5	8.5	14 0	*6.0	*6.0	*7.0
Augusta, Me.	14.8					14.3												†14 5	14 8	14 8	14.3	14.8	4 0	4 0	5.0
				2/17		3/21			4/18					6/18											
Baltimore, Md.	12 4			4 9		12 4			12 9					13 9				13.9	12.4	10 4	11.9	13.9	4.0	4 0	5.0
		1/19				3/8	3/25	3/30	4/2																
Springfield, Mass.	12.5	13 5				11.5	12.3	14 0	14 5									14 5	14.9	10 0	11 5	14.5	2 0	3 0	4.0
									4/15					6/21											
Detroit, Mich.	11.5								9.5					9.6				9 6	14 8	7 3	9 5	11 5	3.0	3.0	4 0
									4/15					6/21											
Duluth, Minn.	13.5								14.6					14 7				14.7	15.5	12 5	13 5	14.7	3 0	3 0	4.0
		*1/13		2/5					4/1	4/20				6/1											
Jackson, Miss.	10 0	11 5		10 5					12 5	13 5				13 0				13.0	15 0	8 0	10.0	14.0	5.0	5.5	7.0
									4/15					6/21											
Kansas City, Mo.	11.9								13.0					13.1				13.1	13 9	10.9	11 9	13.1	*3 0	*3.0	*4.0
		1/4							4/15																
Helena, Mont.	19 0	18 0							19.0									19.0	19.0	18 0	18.0	19.0	5.0	5.0	6 0
									4/16																
Omaha, Nebr.	11 9								12 9									12 9	14 24	8.9	11.9	12 9	4.0	4.0	5.0
														6/24	6/27										
Reno, Nev.	16.0													16.5	19 0			19.0	22.0	15.0	16 0	19.0	4.0	4 0	5 0
				2/17		3/23			4/18					6/18	6/21										
Newark, N. J.	12 7			13 2		12 7			13 2					14 2	13 2			13.2	12.7	10 7	12.7	14.2	3.0	3 0	4.0
		1/5				3/26			4/14			5/3													
Albuquerque, N. Mex.	15.0	14 0				11 0			12 0			14.0						14 0	16.0	14.0	11.0	15 0	5.0	5.0	*7 0
						3/18	3/25		4/16			5/21													
New York, N. Y.	12 3					12 5	13.0		13 5			9 5						9.5	14.3	12 3	9 5	13.5	2.0	2 0	4.0
						3/1	3/23		4/18			5/2		6/18											
Charlotte, N. C.	11 0					13.0	14.0		15.0			15.2		16 2				16.2	14.3	10 0	11 0	16.2	5.0	6 0	7.0
									4/15					6/21											
Fargo, N. D.	14 9								16 0					16 1				16.1	16.9	10 0	14 9	16.1	3.0	3 0	4.0
		1/16				3/16	3/29		4/18					6/17											
Cleveland, Ohio	14 0	12.0				12.5	13 0		14.0					13.0				†13.5	13.0	10.0	12.0	14 0	4.0	4.0	5 0
									4/5	4/14															
Tulsa, Okla.	11.0								12 0	13 0								13.0	13.0	7.0	11.0	13 0	4 0	4 0	5 0
									4/1	4/18		5/7	5/24	6/27											
Portland, Ore.	14.0								10.0	8.0		11 0	12 5	15 0				15.0	18.5	8.5	8.0	14.0	4.0	4 0	5.0
						3/21								6/27											
Philadelphia, Pa.	12 0					13 0								13 5				13.5	19 0	10.0	12.0	13 5	3.0	3 0	4 0
		1/9	1/19			3/25			4/16			5/27													
Providence, R. I.	10 5	11 5	12.5			13.0			13 5			12 5						12 5	13 7	10 5	10 5	13.5	2.0	2 0	3.0
				2/17		3/23			4/18					6/18											
Charleston, S. C.	12.5			12.0		12 5			13 0					14.0				14 0	12 5	11.5	12.0	14.0	6.0	6 0	7 0
				2/20					4/15	4/21				6/21											
Huron, S. D.	13 4			12 0					13.0	14.4				14 5				14.5	15.3	12.3	12.0	14 5	4.0	4.0	5 0
						3/7	3/24	3/29	4/7	4/14		5/7	5/23	6/18											
Memphis, Tenn.	10 5					11 5	12 0	12 5	13.0	13.5		14 0	13.5	14 5				14 5	14.0	9.0	10.5	14.5	5.0	7.0	8 0
									4/1	4/13				6/23											
Dallas, Tex.	12 0								13 0	14 0				13.0				13.0	14.0	10 0	12.0	14.0	4.0	4 0	5.0
									4/14	4/30				6 28											
Salt Lake City, Utah	16.5								17.0	17.5				19 0				19.0	18 5	10 0	16 5	17.5	3 5	4.0	5.0
						3/25																			
Burlington, Vt.	15 3					14 8												†15.0	15.3	15.3	14 8	15 3	4.0	4.0	5 0
				2/17		3/23			4/18					6/18											
Norfolk, Va.	12.5			12.0		12 5			13 0					14 0				14 0	12.5	10.5	12.0	14 0	5 0	5 0	6 0
				2/17		3/23			4/18					6/18											
Washington, D. C.	12.9			12 4		12 9			13 4					14 4				14 4	12 9	10.9	12.4	14.4	2.0	2.0	3.0
				2/17		3/23			4/18			5/2		6/18											
Charleston, W. Va.	13 7			13.2		13.7			14 2			14 3		15.3				15.3	13.7	11.7	13 2	15 3	4 0	4.0	5 0
									4/15					6/21											
Milwaukee, Wis.	12.1								13 2					13.3				13.3	14.1	11.1	12 1	13.3	2.0	4.0	5 0
									4/14																
Casper, Wyo.	14 0								15.0									15 0	16 0	13.0	14.0	15 0	4.0	4.0	5.0
									4/1	4/18	4/27	5/7	5/24	6/27											
Seattle, Wash.	14 6								10 0	9.0	8.0	11.0	12.5	15 0				15.0	18.5	9.0	8.0	15 0	3.0	5.0	6 0
		1/28							4/15					6/21											
Minneapolis, Minn.	11 5	13 3							14.3					14 4				14.4	15 2	11.4	11.5	14 4	3.0	3.0	4.0
Average price	12 87																	14.21					3 83	4 09	5 14

*Includes 1-cent city or parish tax. †Price changed July 1.

California Oil Production in First Half of Year Brought to Its Lowest Level Since 1922

By L. P. STOCKMAN

Crude oil production in California during the first half of 1932 was substantially lower than the output for any similar period during the past 10 years and if effective curtailment is continued for the balance of the current year, production for 1932 will be the lowest recorded since 1922.

Curtailment and proration of production have been important factors in California during the past two years, but it was not until June, 1932, that maximum effectiveness was attained. In reaching the curtailment objective, crude oil production was cut back approximately 50,000 bbls. per day, although the average daily production for the month of June was only about 25,000 bbls. per day below May production due to the fact that the curtailment goal was not reached until late in the month. At the close of June crude oil production in California had been arbitrarily reduced to 452,758 bbls. per day. As a result of this progressive step, major companies advanced the posted price of refining crude and subsequently increased gasoline prices to compensate for the additional cost of raw material.

Practically every field in the State contributed toward the reduction in production effected during the month of June. Long Beach, for instance, produced 65,872 bbls. on June 30, as compared with an output of 75,541 bbls. on May 31, a curtailment of 9,669 bbls. per day. Dominguez, where lease requirements compelled operators to resume unrestricted operations earlier in the year and subsequently shot daily production up to 34,016 bbls. on April 12, is credited with a production of 13,840 bbls. on June 30, as compared with the high just mentioned and 17,710 bbls. at the close of May. Playa Del Rey, which had been averaging approximately 17,500 bbls. per day for several months, produced 14,788 bbls. on June 30 and 17,219 bbls. on May 31. Santa Fe Springs, which averaged 66,305 bbls. per day in April and 63,800 bbls. in May, produced 57,420 bbls. on June 30.

Of outstanding importance from a curtailment standpoint is the splendid spirit of co-operation shown by operators in the Ventura Avenue, Elwood and Kettleman North Dome Fields, all three of which are producing substantially below their respective allotments. Ventura Avenue has shown a larger percentage of curtailment than any other field in the State during the past several months. This field, which produced 28,738 bbls. on June 30, as compared with a maximum permissible production of 40,000 bbls. per day, has been averaging approximately 12,000 bbls. per day below its allotment since March and will probably continue at the present restricted rate until some time during the coming winter when a number of wells will be opened up to take care of the increased demand for natural gas. A sympathetic increase in crude oil production will obviously result when natural gas production is stepped up. In order to compensate for any seasonal overproduction of crude oil, operators in the Ventura Avenue Field have been underproducing during the summer months when natural gas demand is relatively low.

Long Beach headed the production list during the first half of the current year, followed by Santa Fe Springs, Kettleman North Dome, Midway-Sunset and Ventura Avenue in the order named. This order does not indicate the relative importance of the fields in question from a production standpoint, however, as Kettleman North Dome, with a potential daily production of approximately 250,000 bbls., could, if opened up, produce more oil than any two other fields in the State. Long Beach tops the production list for the simple reason that until recently it has consistently disregarded curtailment obligations and has produced almost to its maximum, while Kettleman North Dome, Midway-Sunset and Ventura Avenue have been adhering strictly to the curtailment program. All three of the latter fields, if opened up, could each produce more oil per day than the principal offender. There has been a certain degree of curtailment effected in the Long Beach Field during the past year but this practice has not been universal throughout the field. All of the major companies and a number of progressive independent refiners have borne the greater part of any actual curtailment effected.

High Point in April

Crude oil production in California showed a consistent upswing during the early part of the current year and reached a peak of 517,481 bbls. per day in April due to the obligatory resumption of production in the Dominguez Field. With the adjustment of conditions in this field and a concerted move to reduce crude oil production throughout the State to the established allowable of 476,700 bbls. per day, production was reduced to 502,443 bbls. per day in May and subsequently cut back to 452,758 bbls. at the close of June. If operators keep in line and do not rock the boat by overproducing, the average daily production for 1932 will be well below the 500,000-bbl. mark.

It might not be amiss, while commenting on the probable daily average production for the year, to call attention to the difficulty being experienced in keeping crude oil production down to the established allowables. The expectation that crude oil production in California during 1932 will probably be below 500,000 bbls. per day depends entirely upon the continuance of effective curtailment. If the proration program blows up, the average daily production may be either substantially higher or lower than the normal expected rate. Production in 1931 averaged 517,340 bbls. per day, or 282,761 bbls. per day below the State's record peak production of 800,101 bbls. per day established during 1929. Decreased drilling, due to the absence of any prolific fields having town lot areas, and the commendable attitude of operators holding acreage in undeveloped fields, or refraining from deep zone exploitation in existing fields, have greatly enhanced curtailment work.

Very Little Wildcatting

Wildcat exploration in California, reflecting an extended period of abnormally low prices, is almost back on a pre-war basis. The amount of work undertaken during the first half of 1932 was substantially below the average for the past decade and was down to the lowest level reached since 1921. There has been a definite tendency during the past year to eliminate or restrict wildcat exploration as far as possible and there is nothing tangible at the present time to indicate any deviation from this policy. Major companies, recognizing the necessity of conserving cash assets, and independent operators, due to decreased revenues, have both contributed to the substantial decline in exploratory work. Major companies in California have just about come to the conclusion that it is useless to make any further attempts to cope with unrestricted drilling or overproduction of crude oil and have apparently decided not to jeopardize their current assets by attempting to stem the ever-rising tide. They have tacitly informed independent operators that they must keep production down to current requirements, which, by the way, is just the same as saying that they will not continue indefinitely to draw on cash reserves to meet periodic emergencies resulting from uneconomic overproduction. Major companies, holding practically 98 per cent of crude and refined oil stocks on the Pacific Coast, have practically given up any hope of liquidating excessive storage. In consideration of this factor, they expect independent producers to limit current production to normal requirements. As the situation stands at the present time, there will be a draft on stocks during July, August and September and a probable addition thereafter, so that unless an additional curtailment is effected later in the year there should be no great reduction in stocks.

Important Deep Discoveries

Although drilling operations were down to the lowest level reached in a number of years, another interesting chapter was added to the State's petroleum history as the result of deep exploratory work in several areas. In the North Belridge Field of Kern County the Belridge Oil Co. proved up the existence of a new and highly productive horizon when its well No. 64-27 came in under a natural flow doing 2,500 bbls. of clean 51.1 gravity oil and 80,000,000 feet of natural gas per day from 8,056 feet. Considerable difficulty was experienced in killing this well in conformity with the curtailment program, as the original installation of pumps was unequal to the task of bucking its casing pressure which was well in excess of 3,100 pounds. This well, incidentally, is credited with the highest tubing and casing pressures recorded in any California well up to the present time. The Lakeview gusher, the largest well ever finished in California, would probably have exceeded the pressure on the Belridge Oil Co.'s new well, but, since it blew out of control, no pressure gauge readings were recorded.

The significance which attaches to the Belridge Oil Co.'s new discovery lies in the fact that it tends to indicate the probable existence of similar deep zones at Lost Hills, South Belridge, Midway-Sunset and possibly in other fields located along the western rim of the San Joaquin Basin. If this possibility ultimately becomes a reality, it will necessitate a substantial revision in the estimated amount of recoverable oil in California. The geological importance of the Belridge Oil Co.'s deep discovery has not yet been definitely ascertained due to the company's policy of withholding all data relating to subsurface conditions. It is rather generally believed, however, that this new deep well was finished in Tejon

(Continued on Page 47)

PRODUCTION OF CRUDE BY DISTRICTS, JANUARY TO JUNE, INCLUSIVE, 1932

Districts—Northern Fields—	January	February	March	April	May	June	Total	Daily
Coalinga	226,360	216,330	269,872	314,097	328,237	316,315	1,671,211	9,183
Elk Hills	392,510	369,158	393,902	379,291	395,447	363,809	2,294,117	12,605
Fruitvale	111,545	111,551	113,061	120,423	136,449	124,030	717,059	3,940
Kern River	304,867	277,969	311,026	300,466	300,281	276,444	1,771,053	9,731
Kettleman North Dome	1,868,225	1,735,529	1,856,637	1,804,025	1,821,110	1,798,545	10,884,071	59,803
Kettleman Middle Dome	.....	.....	.....	6,687	3,850	.....	10,537	58
Lost Hills-Belridge	301,290	264,704	286,042	278,340	277,210	266,190	1,673,776	9,197
McKittrick	53,740	52,600	55,646	56,592	54,449	54,455	327,482	1,799
Midway-Sunset	1,508,710	1,430,823	1,527,733	1,523,854	1,545,948	1,479,329	9,016,337	49,541
Mount Poso	253,918	234,814	247,380	237,759	241,654	237,008	1,452,533	7,981
Round Mountain	39,630	63,689	87,146	89,062	127,454	100,343	507,324	2,787
Wheeler Ridge	16,450	15,159	15,716	16,049	16,583	15,340	95,297	524
Coastal Fields—								
Capitan	.....	.....	.....	3,092	.....	.....	3,092	17
Elwood	509,331	486,241	509,275	506,311	494,712	418,696	2,924,566	16,069
Rincon	50,530	46,686	51,249	45,624	52,670	42,793	289,552	1,591
San Miguelito	10,604	14,311	14,213	13,275	14,048	8,287	74,738	410
Santa Barbara	9,700	8,422	9,268	8,113	8,520	10,378	54,401	269
Santa Maria	78,474	77,546	81,398	88,244	108,136	87,129	520,927	2,862
Summerland	3,359	3,508	3,334	3,208	3,444	3,333	20,186	111
Ventura Avenue	1,252,006	1,135,157	956,911	881,141	936,428	843,313	6,004,956	32,994
Ventura-Newhall	110,342	104,675	112,880	108,804	111,986	107,242	655,929	3,604
Watsonville	3,937	1,812	1,937	1,875	1,937	1,825	11,323	62
Southern Fields—								
Coyote	301,053	298,799	322,146	312,479	311,868	298,165	1,844,510	10,135
Dominguez	469,179	420,443	619,161	957,421	732,409	452,915	3,651,528	20,063
Fullerton (Brea Olinda)	278,651	256,373	257,968	249,868	248,440	247,908	1,539,208	8,457
Huntington Beach	685,875	643,187	678,999	668,352	690,965	622,300	3,989,678	21,921
Inglewood	426,609	401,684	425,777	414,374	424,385	406,005	2,498,834	13,730
Lawndale	7,283	8,298	8,812	9,510	9,807	10,794	54,504	300
Long Beach	2,414,539	2,359,686	2,559,780	2,464,350	2,489,393	2,170,852	14,458,600	79,443
Los Angeles-Salt Lake	36,128	35,299	35,845	33,855	34,607	32,900	208,634	1,146
Montebello	193,281	182,816	198,282	192,942	201,636	190,111	1,159,068	6,369
Newport	684	121	122	.....	.....	.....	927	5
Playa Del Rey	625,639	560,284	567,120	533,211	543,509	465,171	3,294,934	18,104
Potrero	30,744	24,928	21,543	17,282	15,331	10,883	120,651	663
Richfield	200,233	178,336	195,377	194,963	189,550	190,715	1,149,174	6,314
Rosecrans	96,386	92,346	96,820	92,985	92,139	88,460	559,136	3,072
Santa Fe Springs	2,024,056	1,919,977	2,041,583	1,989,148	1,977,814	1,787,456	11,740,034	64,506
Seal Beach	412,163	374,394	408,014	377,920	401,834	372,809	2,347,134	12,896
Torrance	193,060	180,432	197,030	192,687	197,448	183,005	1,143,662	6,284
Whittier	33,050	28,775	36,910	36,765	34,053	33,767	203,320	1,117
Total	15,532,141	14,616,862	15,575,915	15,524,444	15,575,741	14,118,970	90,944,073	499,693

Crude Oil Price Changes First Six Months 1932

EASTERN STATES

	Jan. 1	Feb. 26	Mar. 1	Mar. 14	Apr. 12	Apr. 25	Apr. 26
Pennsylvania grade oil in National Transit Lines (Pa.)	1.85	....	....	1.82	....	2.02	....
Pennsylvania grade oil in Southwest Pennsylvania Line (W. Va.)	1.55	....	....	....	....	1.75	....
Pennsylvania grade oil in Eureka Lines (Pa.)	1.45	1.50	....	....	....	1.70	....
Pennsylvania grade oil in Buckeye Lines (Ohio)	1.25	....	1.30	*1.35	....	1.55	....
Corning grade oil in Buckeye Lines (Ohio) 25-cent grade	.85	....	....	....	.95	....	1.05
Cabin Creek, W. Va.	1.45	....	....	....	....	1.70	..
Bradford Hollow, W. Va.	1.45	....	....	....	....	1.70	....
Ragland grade oil in Cumberland Lines (Ky.)	.60	....	....	....	....	....	....
Wayne district in Cumberland Pipe Lines	1.17	....	....	....	....	1.70	....
Bradford district (Tide Water Pipe Line Co.)	1.85	....	....	1.82	....	2.02	....
Allegany district (Tide Water Pipe Line Co.)	1.85	....	....	1.82	....	2.02	....

*March 12.

Posted by Joseph Seep Purchasing Agency except in Bradford and Allegany Fields where postings are made by Tide Water Pipe Line Co.

MIDDLE WESTERN STATES

	Jan. 1	Jan. 18	Apr. 11	Apr. 16	May 17	June 10	June 30
Lima	1.00	....	1.15	....	....	....	....
Wooster	1.15	....	1.20	....	....	....	....
Illinois	.95	....	1.10	....	....	....	....
Indiana	.60	....	.75	....	....	....	....
Princeton	.95	....	1.10	....	....	....	....
Western Kentucky	.90	....	1.05	....	....	....	....
Posted by Ohio Oil Co.							
Midland	.55	....	....	....	.65	....	.75
Posted by Pure Oil Co.							
Oil City (Ky.)	.75	.60	....	.85	....	1.00	....
Posted by Stoll Oil Ref. Co.							
Somerset, Ky.	.80	....	....	*.85	....	....	....
Posted by Ashland Refining Co.							

*April 25.

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL AND SOUTHWEST TEXAS

	Jan. 1*	Apr. 1†
Below 29	.61	.76
29 to 29.9	.63	.78
30 to 30.9	.65	.80
31 to 31.9	.67	.82
32 to 32.9	.69	.84
33 to 33.9	.71	.86
34 to 34.9	.73	.88
35 to 35.9	.75	.90
36 to 36.9	.77	.92
37 to 37.9	.79	.94
38 to 38.9	.81	.96
39 to 39.9	.83	.98
40 and above	.85	1.00

Posted by Stanolind Crude Oil Purchasing Co., The Texas Company, Continental Oil Co. and Sinclair Crude Oil Purchasing Co., includes Oklahoma, Kansas and North Texas. Magnolia Petroleum Co. includes Oklahoma, Kansas, North Texas, Panola County in East Texas, Lytton Springs and Somerset in Southwest Texas, Humble Oil & Refining Co. includes North Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona, Lytton Springs and Corsicana light. Postings by Carter Oil Co. and Gypsy Oil Co. include Oklahoma and Kansas.

*The Magnolia Petroleum Co. was paying flat prices January 1 as follows: North and North Central Texas, which includes only Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden, 83 cents; Central Texas, which includes only Mexia, Wortham, Corsicana light, Panola County and Lytton Springs, 79 cents; East Texas district, 83 cents; West Texas, which includes Winkler, Crane, Upton, Howard, Glasscock and Mitchell Counties, 50 cents; Panhandle district of Texas: Gray County, 73 cents; Carson and Hutchinson Counties, 66 cents; Southwest Texas: Mirando, 75 cents; Darst Creek, 60 cents; Corsicana heavy and Luling, 49 cents. Oklahoma: Cushing, Yale, Oklahoma City, Morrison, Wewoka, Seminole, 83 cents; Cement, Duncan and Walters, 75 cents; Hewitt and Graham, 67 cents; Healdton, 52 cents. On January 8 the Magnolia adopted the regular gravity price schedule except below 28 gravity, 52 cents.

†Posted April 1 by Continental Oil Co. and Magnolia Petroleum Corp., met by Stanolind Crude Oil Purchasing Co., Gypsy Oil Co., Carter Oil Co. and other major buyers.

ARKANSAS—NORTH LOUISIANA

Caddo, Bull Bayou, Cotton Valley, Sarepta-Carterville, Rainbow, Crichton, DeSoto, Haynesville, Homer (La.), and El Dorado, Ark.—

Gravity—	Jan. 1	Apr. 1*
Below 25 degrees	...	.68
25 to 25.9	...	.70
26 to 26.9	...	.72
27 to 27.9	...	.74
28 to 28.9	.61	.76
29 to 29.9	.63	.78
30 to 30.9	.65	.80
31 to 31.9	.67	.82
32 to 32.9	.69	.84
33 to 33.9	.71	.86
34 to 34.9	.73	.88
35 to 35.9	.75	.90
36 to 36.9	.77	.92
37 to 37.9	.79	.94
38 to 38.9	.81	.96
39 to 39.9	.83	.98
40 and above	.85	1.00

*Posted by The Texas Company and Magnolia Petroleum Co. April 1, met by other major buyers April 11.

Posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co., to include Pine Island in (Caddo), Haynesville, Bull Bayou and El Dorado, Standard Oil Co. of Louisiana; Gulf Refining Co., all fields; Atlantic Oil Producing Co., in Homer, Haynesville

STANDARD OIL CO. OF CALIFORNIA

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights	Inglewood	Playa Del Rey (see note)	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra	Huntington Beach	Orcutt*	Santa Paula*	Elwood, Terrace (f.o.b. ship)
14-14.9—Jan. 1	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.55	$.55	....	$.65	$.55	$.55	$.65	$.65	$.55	$.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
15-15.9—Jan. 1	.65	.65	.65	....	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	....	.65	....
16-16.9—Jan. 1	.65	.65	.65	....	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
17-17.9—Jan. 1	.65	.65	.65	....	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
18-18.9—Jan. 1	.65	.65	.65	....	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
19-19.9—Jan. 1	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
June 26	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.65	.55	.65	....
20-20.9—Jan. 1	.65	.65	.66	.65	.66	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65	.66	.56	.65	....
June 26	.69	.69	.71	.69	.69	.69	.69	.65	....	.59	.59	....	.65	.57	.59	.68	.69	.59	.69	....
21-21.9—Jan. 1	.65	.65	.68	.66	.67	.65	.66	.65	....	.55	.57	....	.65	.55	.55	.65	.68	.57	.65	....
June 26	.74	.74	.77	.74	.74	.74	.74	.66	....	.63	.63	....	.67	.60	.62	.72	.74	.63	.72	....
22-22.9—Jan. 1	.65	.65	.70	.67	.68	.66	.68	.65	....	.56	.59	....	.65	.55	.55	.65	.70	.59	.65	....
June 26	.79	.79	.82	.78	.79	.79	.79	.70	....	.68	.69	....	.70	.63	.65	.77	.79	.69	.75	....
23-23.9—Jan. 1	.67	.67	.72	.68	.70	.67	.70	.68	....	.58	.60	....	.65	.55	.55	.65	.72	.61	.65	....
June 26	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.83	.84	.75	.78	....
24-24.9—Jan. 1	.69	.69	.74	.69	.72	.68	.72	.67	$.65	.61	.62	$.69	.65	.55	.55	.65	.74	.63	.66	....
June 26	.89	.89	.92	.86	.89	.89	.89	.81	.73	.81	.81	.89	.76	.69	.72	.89	.89	.81	.81	....
25-25.9—Jan. 1	.71	.71	.76	.70	.74	.70	.74	.69	.65	.64	.61	.71	.65	.55	.57	....	.76	.65	.68	....
June 26	.93	.93	....	.91	.73	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....	.93	.87	.84	....
26-26.9—Jan. 1	.73	.73	....	....	.76	....	....	.71	.65	.66	.66	.73	....	....	....	....	....	.67	.70	....
June 26	.97	.97	....	.96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....	.97	.92	.87	....
27-27.9—Jan. 1	.75	.75	....	....	.78	....	....	.73	.68	.68	.67	.75	....	....	....	....	....	....	.72	....
June 26	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....	....	....	.90	....
28-28.9—Jan. 1	.77	....	....	....	.80	....	....	.75	.71	.71	.69	.77	....	....	....	....	....	....	.74	....
June 26	1.03	....	....	....	1.03	....	....	.98	.94	1.02	.99	1.03	....	....	....	....	....	....	.93	....
29-29.9—Jan. 1	.79	....	....	....	....	....	....	.77	.73	.74	.71	.79	....	....	....	....	....	....	.76	....
June 26	1.06	....	....	....	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....	....	....	.99	....
30-30.9—Jan. 1	.81	....	....	....	....	....	....	.79	.75	.76	.72	.81	....	....	....	....	....	....	.78	....
June 26	1.09	....	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....	....	....	....	....
31-31.9—Jan. 1	....	....	....	....	....	....	....	....	.78	....	....	.83	....	....	....	....	....	....	....	....
June 26	....	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....	....	....	....	....
32-32.9—Jan. 1	....	....	....	....	....	....	....	....	.80	....	....	.85	....	....	....	....	....	....	....	....
June 26	....	....	....	....	....	....	....	....	.10	....	....	1.15	....	....	....	....	....	....	....	....
33-33.9—Jan. 1	....	....	....	....	....	....	....	....	.83	....	....	.87	....	....	....	....	....	....	....	$.79
June 26	....	....	....	....	....	....	....	....	.14	....	....	....	....	....	....	....	....	....	....	1.04
34-34.9—Jan. 1	....	....	....	....	....	....	....	....	.85	....	....	.89	....	....	....	....	....	....	....	.81
June 26	....	....	....	....	....	....	....	....	.18	....	....	....	....	....	....	....	....	....	....	1.10
35-35.9—Jan. 1	....	....	....	....	....	....	....	....	.87	....	....	....	....	....	....	....	....	....	....	.81
June 26	....	....	....	....	....	....	....	....	.22	....	....	....	....	....	....	....	....	....	....	1.16
36-36.9—Jan. 1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.87
June 26	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.22
37-37.9—Jan. 1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
June 26	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.28

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 25.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9, degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.8 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents, and Standard's prices for oil of higher gravity.

Kettleman Hills—General Petroleum Co., effective January 1, posted following prices: 33-33.9 degrees, 66 cents; 34-34.9 degrees, 68 cents; 35-35.9 degrees, 70 cents; 36-36.9 degrees, 72 cents; 37-37.9 degrees, 74 cents; 38-38.9 degrees 76 cents; 39-39.9 degrees, 78 cents. The Associated Oil Co. was paying 66 cents for oil 30 gravity and over. The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03, Standard Oil Co., as its initial posting. Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

*Posted by Union Oil Co. only.

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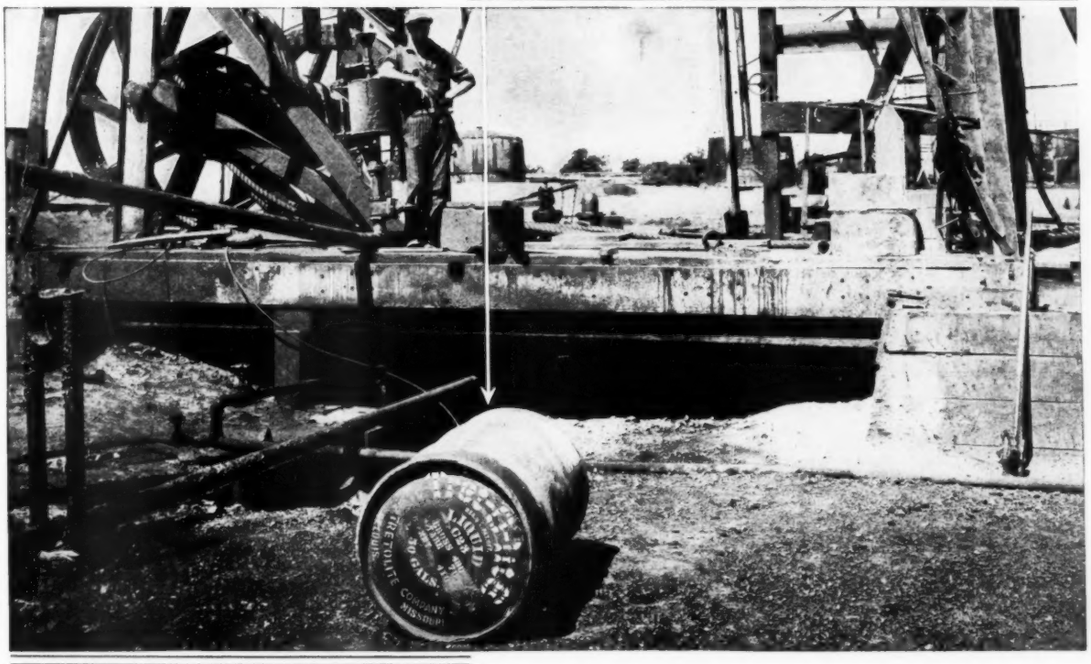

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REPRESENTATIVES IN ALL PRINCIPAL FIELDS

OGJ-7-21 Gray

and West El Dorado; The Texas Company in Caddo, Bull Bayou and Crichton; Louisiana Oil Refining Corp., all fields.

Stephens—	Jan. 1	Apr. 12
Below 28.9	.41	.61
29 and above	.44	.64

Posted by Atlantic Oil Refining Co. and Louisiana Oil Refining Corp.

	Jan. 1	Apr. 1*
Smackover	.55	.65

*By Magnolia, met by Standard of Louisiana and other buyers April 11.

Posted by Standard Oil Co., The Texas Company, Gulf Refining Co., Atlantic Oil Producing Co., Louisiana Oil Refining Corp. and Magnolia Petroleum Co.

	Jan. 1	Apr. 12
Urania	.50	.60
East El Dorado (Calion)	.52	.65

Cotton Valley—Posted by Standard Oil Co. of Louisiana, Magnolia Petroleum Co. and Louisiana Oil Refining Corp.

East El Dorado—Posted by Gulf Refining Co.

GULF COAST

Gulf Coast Grade B, Refugio light and Lockport

	Jan. 1	Apr. 1*
Below 25	.70	.80
25 to 25.9	.71	.81
26 to 26.9	.72	.82
27 to 27.9	.73	.83
28 to 28.9	.74	.84
29 to 29.9	.75	.85
30 to 30.9	.76	.86
31 to 31.9	.77	.87
32 to 32.9	.78	.88
33 to 33.9	.79	.89
34 to 34.9	.80	.90
35 to 35.9	.81	.91
36 to 36.9	.82	.92
37 to 37.9	.83	.94
38 to 38.9	.84	.96
39 to 39.9	.85	.98
40 and above	.86	1.00

*The Texas Company April 1. Humble Oil & Refining Co. and Gulf Pipe Line Co. April 11.

Jennings and Sorrento—Posted by Gulf Refining Co. of Louisiana January 1, 65 cents; April 11, 75 cents.

High Island—Posted by Gulf Pipe Line Co. January 1, 65 cents; after April 11 same as gravity table above.

Markham—Posted by The Texas Company January 1, 67 cents; after April 11 same as gravity table above.

Refugio heavy—Posted by Humble Oil & Refining Co. January 1, 75 cents; April 11, 80 cents.

EAST TEXAS

	Jan. 1	Apr. 1
Below 29 degrees	.61	.98
29 to 29.9	.63	.98
30 to 30.9	.65	.98
31 to 31.9	.67	.98
32 to 32.9	.69	.98
33 to 33.9	.71	.98
34 to 34.9	.73	.98
35 to 35.9	.75	.98
36 to 36.9	.77	.98
37 to 37.9	.79	.98
38 to 38.9	.81	.98
39 to 39.9	.93	.98
40 and over	.85	.98

Posted by Panola Pipe Line Co., Magnolia Petroleum Co., Sinclair Refining Co., Gulf Pipe Line Co. and The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

	Jan. 1	Apr. 1*	Apr. 11
Luling	.49	.64	...
Mirando	.75	.90	...
Corsicana, heavy	.49	.64	...
Salt Flat	.60	...	.75
Pettus	.85	...	1.00
Darst Creek	.60	.75	...
Dobrowolski	Same as Mid-Cont. grav. table		
Lytton Springs	Same as Mid-Cont. grav. table		
Somerset	Same as Mid-Cont. grav. table		

*Posted by Magnolia April 1, met by other buyers April 11, except Humble posted 80 cents for Mirando on that date.

Note—Luling and Corsicana heavy posted by the Magnolia Petroleum Co. and Grayburg Pipe Line Co. Mirando (Webb, Jim Hogg and Zapata Counties) by Texpata Pipe Line Co., Magnolia Pipe Line Co., Humble Oil & Refining Co. and Crowe Central Pipe Line Co. Somerset posted by Grayburg Pipe Line Co.

Thrall (same as North Texas gravity scale less 19½ cents freight charge).

WEST TEXAS

	Jan. 1	Apr. 1*
Crane, Upton, Ector, Crockett, Howard, Glasscock, Michell, Pecos and Winkler, Tex., crudes	.50	.65

*Effective April 1 as posted by Magnolia Petroleum Co. and The Texas Company. Humble Oil & Refining Co., Gulf Pipe Line Co. and other buyers met price April 11.

Iatan and Westbrook—
Same as North Texas gravity table.

	Jan. 1	Apr. 11
Toborg	.25	.55

Posted by Shell Petroleum Corp.

MEXICAN CRUDES

	Jan.	Feb.	Mar.	Apr.	May	June
Panuco heavy, f.o.b. Tampico	.45	.45	.47	.47	.47	...

Note—Prices based on transactions for previous month.

TEXAS PANHANDLE

Gray County—	Jan. 1	Apr. 1*
Below 34	.61	.76
35 to 35.9	.63	.78
36 to 36.9	.65	.80
37 to 37.9	.67	.82
38 to 38.9	.69	.84
39 to 39.9	.71	.86
40 and above	.73	.88

*Posted by Magnolia April 1, met by Humble April 11.

Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co.

Carson, Hutchinson and Wheeler Counties—	Jan. 1	Apr. 1*
Below 34	.56	.66
35 to 35.9	.58	.68
36 to 36.9	.60	.70
37 to 37.9	.62	.72
38 to 38.9	.64	.74
39 to 39.9	.66	.76
40 and above	.68	.78

*Posted by Magnolia April 1, met by Humble April 11.

Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co.

ROCKY MOUNTAIN FIELDS

Salt Creek and LaBarge—	Jan. 1	Apr. 11
Below 29 gravity	.61	.76
29 to 29.9	.63	.78
30 to 30.9	.65	.80
31 to 31.9	.67	.82
32 to 32.9	.69	.84
33 to 33.9	.71	.86
34 to 34.9	.73	.88
35 to 35.9	.75	.90
36 to 36.9	.77	.94
37 and above	.79	.94
Greasewood (Colo.)	.....	1.00
Rock Creek (Wyo.)	.85	1.00
Big Muddy	.83	.98
Grass Creek, light	.90	1.20
Grass Creek, heavy	.62	....
Fort Collins	.35	.86
Elk Basin	.90	1.20
Lance Creek	1.05	1.15
Poison Spider	.70	....
Rex Lake	1.10	....
Cat Creek (Mont.)	.90	1.20
Sunburst	1.00	1.05
Artesia (N. Mex.)	.35	....
Hogback	.80	....
Florence	.32	.80
Iles—		
33 and above	.75	....
Below 33	.53	....
Lea County	.50	*.65
Wellington	.30	.76
Dutton Creek	.60	.82
Frannie, light	.61	....
Frannie, heavy	.51	....
Hudson	.65	....
Lander	.40	....
Border (Mont.)	1.55	....
Dry Creek	1.00	....
Lost Soldier	.59	.80
Greybull	1.05	1.20

*April 1.

Note—Salt Creek, Cat Creek, Hudson, Greybull and Hogback posted by Midwest Refining Co. and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia posted by Continental Oil Co. Border posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard and Florence posted by the Continental Oil Co. Osage posted by Arro Oil & Refining Co.

CANADIAN FIELDS

	Jan. 1	Apr. 22
Oil Springs	1.97	....
Petrolia	1.90	....
Turner Valley		
40-44.9	2.08	1.56
45-49.9	2.08	2.18
50 and above	2.65	2.80

Posted by Imperial Oil Co., Ltd., and Regal Oil Co.

Increase of New Wells in U. S. Credited to Rush in East Texas

(Continued from Page 32)

duction of 323 bbls. as against 409 bbls. a year before. That only six dry holes were drilled shows how wildcatting slumped in the Panhandle area.

In the North and Central Texas areas 518 wells were completed compared with 729 in the same period last year, and the initial production per oil well dropped to 73 bbls., as against 118 bbls. last year. A few extensions were recorded but the new pools opened did not give promise of big things.

Quiet in West Texas

In West Texas, while the half year was very quiet, there was a revival of wildcat drilling in the closing weeks of the period. Taken as a whole the quiet that reigned over the great West Texas area is indicated by the fact that only 90 wells were completed as against 221 in the first half of 1931, and the new oil wells had an average initial production of 173 bbls. as against 241 bbls. 12 months before. Crockett County was the most active spot in the area in the matter of leasing operations, a deep test intended to go down to the Ordivician having been the magnet that attracted lease buyers. The well was drilling at the close of the period. Irion County was also being given deep tests, the deepest of these being at 7,543 feet at the close of June. These Ordovician tests are seeking the same deep pay which produced so largely in the Reagan County Field, the oil, it is said, being similar to the well-known Pennsylvania Grade oil produced in the Eastern fields. The most westerly of the counties, Brewster and Presidio, are being tested with one well each. One new pool was opened in West Texas in the first half, that having been in western Ward County. A 40-bbl. well at 4,673 feet, the oil of 33 gravity, was the discovery well, but the cost of drilling so deep with no assurance of anything better than a small well, will slow this development. Ward County was the most active county in the whole field in the first half of this year. An 18,000,000-foot gasser was drilled in Ector County.

New Pools in Oklahoma

Compared with the first half of 1931, well completions in Oklahoma fell off more than 37 per cent in the first half of 1932. There were only 445 wells completed. When this is compared with the 2,545 completions in the first half of 1926 when there was a shortage of oil, the dullness in the field is brought home with a shock.

Initial production of oil wells in Oklahoma in the first half of this year averaged 1,400 bbls. per well, as against 4,091 bbls. in the first half of last year.

Notwithstanding the slump in drilling, seven new pools were opened in the course of the half year in Kay, Okmulgee, Hughes, Pottawatomie, Lincoln and Osage Counties, but general business conditions precluded the rush of development work that would usually have followed such discoveries.

The Fish Pool in Hughes County and near Holdenville, was thus far the most important of the 1932 discoveries. That is to say, there was more successful drilling done there than in the other discoveries. What are believed to be two distinct pools were opened near the Naval Reserve in Osage County, a territory which many believed had been thoroughly explored. One of the Osage discovery wells is producing from Silicious lime and the other from the Hominy sand.

The most important wildcat work under way at this time lies in the territory about 12 miles north of the Oklahoma City Field. It will be a deep drilling exploration and results will not be known until some time in October, at least. The west side of the southern oil regions of the State are expected to contribute the greatest number of tests in the last half of the year, but these will not be deep, as depth is measured in the Oklahoma City territory, and results will be known there in a relatively short time from the beginning of drilling.

New production was found in 21 counties of the State in the first half of the year, while in 11 counties wildcatters met with naught but failure. In two other counties, Pittsburg and Latimer, gas wells were completed.

Kansas Was Active

The busiest spots in Kansas in the first half of this year were in Greenwood, McPherson, Cowley, Sedgwick and Ellsworth Counties, and in the matter of wells completed the half year compared favorably with the same period last year when it is considered that in most other producing divisions there was a considerable falling off. Drilling was slowed down in Kansas because of the hesitancy of oil purchasers to lay pipe lines to the distant fields. The big production in East Texas and in Oklahoma City seriously affected Kansas and delayed the development of the newer fields in Reno, Rice, Harvey, Barton, Kingman and even in McPherson and Ellsworth Counties. The Barton-Ellsworth arch, a region over 60 miles wide and 170 miles long, has thus far only been scratched and already a dozen pools have been opened, miles apart. Under prosperous conditions this big area would be dotted with wildcat tests, but while practically all the territory is under lease, much of it being in blocks, the development is left to the future.

The most important area opened in Kansas in the six months was the McPherson Pool in McPherson County. In northern Harvey County the Hollow Pool, which was opened on a 1-acre lease by the man after whom the pool was named, was extended by several tests. This pool is on the Abilene arch on which, also, is the Voshell Pool in McPherson County. A townlot development in Winfield, the county seat of Cowley County, revived interest in that area and 28 oil wells were drilled in the county in the first half of the year.

There is no question but that central and western Kansas will be given a vast wildcat exploration when conditions in the oil business get back to a point where refiners are looking for new sources of supply.

In the Rocky Mountains

Only 70 wells were completed in the Montana, Wyoming, Utah, Colorado and New Mexico fields in the first half of the year, as against 111 in the same period last year. The Hobbs Pool in Lea County, New Mexico, was extended half a mile to the north and a third of a mile northwesterly. In Wyoming, the Frannie Pool, in Park County, was extended a quarter mile westerly. Montana had two important extensions of the Dry Creek Pool in Carbon County, a mile northwesterly and a mile easterly. In the Hiawatha Pool in Moffat County, Colorado, gas wells began to show oil, which is expected to lead to development work in that area with oil as the objective. Drilling in Utah, Washington and Idaho was disappointing in its results.

Zwolle Field Very Active

Sabine Parish in North Louisiana was one of the busiest spots in the Mid-Continent Field in the first half of the year. Out of 122 completions in the North Louisiana territory, 89 were in Sabine, and of these 41 were oil wells with an average initial production of 526 bbls. per well. Most of the activity was in the Zwolle Field. The last half of the year promises a lot of drilling in the Zwolle area. Arkansas, Mississippi and the East Texas gas field experienced a quiet half year, with only minor results. Nearly 1,000,000,000 feet of gas was developed from the 27 gas wells completed in Mississippi.

Deep Drilling in California

While drilling in California was at the lowest ebb in many years important deep discoveries were made in several areas and the deepest well ever drilled in America was still drilling at 10,265 feet when the semiannual report was written. The center of activity in the Kettleman Hills Field shifted to the west in the course of the six months. The most important discovery of the half year in California was the opening of a pay sand in the Belridge Field at 8,056 feet which yielded an initial production of 2,500 bbls. of 51 gravity crude. In the Ventura Avenue Field the Associated Oil Co. had a well in sand at 9,710 feet but could get no deeper because of the tremendous gas pressure. This pay sand was discovered in April, 1931, at 8,823 feet. This is called the 57 zone and the discovery well did not penetrate the sand very far. Little wildcatting was done in California this year and such operations were discouraged because of the wish to keep production in the State within bounds.

Central West Was Dull

Outside of a 150-bbl. completion in the old Cygnet Field in Wood County, Ohio, the Lima Field yielded little of interest. Fifty-six completions, as against 70 in the same period last year, marked the half year's work. In the Central Ohio Field, which is largely a gas area, 198 wells were finished, compared with 286 in the same period last year. Gibson County, Indiana, came through with some good new wells in old territory and increased the average initial production of the oil wells completed in

Indiana to 81 bbls. per well. Seventy-five wells were finished in Indiana as against 89 last year. Illinois was very quiet, only 18 completed wells having been reported from that State as against 26 in the first half of last year. The wells were very small but averaged a little higher than last year's crop.

Hart County, Kentucky, was the hot spot in the Blue Grass State. Seventy-four wells were completed in that county, of which 60 were oil wells averaging 77 bbls. per well in initial production from shallow horizons. Fourteen gas wells were completed. In the State as a whole 217 wells were completed as against 258 in the same period last year. Initial production of the new oil wells fell off from 81 bbls. in the first half of 1931 to 54 bbls. this year.

Midland Revived Michigan

The Midland Field in Michigan was one of the most interesting and prolific of the new fields recently developed. Out of 66 wells completed in Michigan in the first half of the year 44 were in Midland County and of these 33 were oil wells averaging 1,250 bbls. per well in initial production, which few fields have exceeded. Some of the wells in the field yielded as high as 3,000 bbls. the first 24 hours. The field was under curtailment all of the half year, in line with the general policy of conservation of oil in flush pools in the United States.

Eastern Fields

Field work declined in the Eastern or Pennsylvania grade oil area, mainly because of the curtailment of production of Pennsylvania grade oil produced in New York, Pennsylvania, West Virginia and southeastern Ohio. Seven hundred and thirty-eight wells were completed of which 480 were oil wells, with an average initial production of 6 bbls. per day. The most important discovery in the Eastern fields was the opening of an Oriskany sand gas field in western Potter County, Pennsylvania, about 20 miles southeast of the Bradford oil field. Three wells were drilled with a combined open flow capacity of over 30,000,000 feet.

California Production First Half Year Lowest Since 1922

(Continued from Page 43)

rocks of Eocene age. The discovery of a new zone below the generally accepted productive Temblor in the North Belridge Field is of special interest at this time in view of the resumption of drilling on No. 1 mascot in the Midway-Sunset Field by the Standard Oil Co. This well, bottomed at 9,269 feet, has been standing suspended for the past 18 months. Work was originally suspended in order to preclude any possibility of upsetting the curtailment program, which might have occurred if a big well had been brought in. If No. 1 mascot is ultimately finished as a large well it will mean much to the Standard Oil Co. due to its extensive holdings in this field. Due to the excessive cost involved, deep drilling in the Midway-Sunet Field would not become much of a factor in state production for perhaps a year as few of the independent operators holding acreage in this area have ample finances to permit unrestricted development.

Deep Drilling Records

Two California drilling records, one for depth and one for deep production, were broken during the current year to date. The Western Gulf Oil Co. broke the record for deep drilling in its No. 1 Bradley, a wildcat in the Santa Maria district of Santa Barbara County, and has established a remarkable record for other operators to shoot at. This well, which reached a depth of 10,265 feet on July 12, was still drilling ahead at last reports, but the final chapter may be written before this is published, as the well has reached the critical stage. The deepest hole drilled in California previous to No. 1 Bradley was the Chanslor-Canfield Midway Oil Co.'s well No. 2 on the Hobson Lease A in the San Miguelito Field, which failed to result in commercial production and was subsequently plugged back. Only two holes have been drilled below 10,000 feet in California up to the present, but it is not at all improbable that this will become rather common practice within the next several years. No California well has been finished as a commercial producer below the 10,000-foot level, but this feat is also expected to be achieved in the not far distant future. This distinction might have already become a reality in the Ventura Avenue Field if it were not for the fact that extreme gas pressure has prevented the Associated Oil Co. from drilling below the 9,710-foot level in No. 83 Lloyd with safety.

The existence of the new deep and highly productive 57 zone in the Ventura Avenue Field was discovered in April, 1931, when No. 57 Lloyd of the Associated was brought in flowing 4,850 bbls. per day from 8,823 feet, but the extent and thickness of the zone was conjectural for a long time as the discovery well only took a limited penetration in the productive formation. The maximum thickness of the 57 zone has not yet been fully determined, as No. 83 Lloyd was still in the pay when drilling operations were concluded, due principally to extreme gas pressure. The latter well confirmed the expectations of petroleum engineers familiar with the prolific tendencies and enormous thickness of oil-bearing formation of the Ventura Avenue Field that No. 83 Lloyd was destined to be a big well.

The center of activity in the Kettleman North Dome Field shifted to the west during the first six months of this year and with several wells drilling out beyond production we may anticipate some interesting developments in the extreme western, or northern end of the field, as some prefer to designate the plunge of the structure toward the Coalinga Field. One well has already been completed as a commercial producer between the blue and the red lines in the western end of the field and, with additional development in this area, we may anticipate a revision of these lines at some future date. The North Kettleman Oil & Gas Co.'s No. 1 Lillis-Welch will go a long way toward establishing the western limits of production and the ultimate location of the blue and red lines in this section of the field. This well, located out beyond the blue line designating the maximum limits of possible production, is not yet deep enough to permit satisfactory correlation but should reach the interesting stage within the next 60 days. Because of its location and possible effect on production and development activities in the western end of the structure, No. 1 Lillis-Welch is perhaps the most important well drilling in the Kettleman North Dome Field at the present time. The North American Consolidated was unsuccessful in extending the red, or inner line, out on the north flank of the North Dome, although some partial success was attained on the Elsinore property as well No. 1, on a preliminary production test, looked good for approximately 1,000 bbls. per day. It is questionable, however, whether this well will produce a sufficient quantity of crude oil and natural gas to liquidate drilling costs. The North American abandoned No. 1 Blauvelt, a deep well on adjoining acreage, as a duster at 9,500 feet.

The first half of 1932 was a period of readjustment, and although free from any violent disturbances, prices prevailing for crude and refined oils during most of the period in question was abnormally low. Late in June the Standard increased the posted price of refinable crude oil and subsequently boosted the price of gasoline 2½ cents per gallon. This revision in prices increased the posted price for 27 gravity Signal Hill crude from 75 cents to $1 per barrel and increased the tank wagon price in Los Angeles territory to 16½ cents per gallon for Ethyl Gasoline, 13½ cents for regular gasoline and 11½ cents for the third grade gasoline. Retail prices, including the state and Federal gasoline taxes, are 20½ cents, 17½ cents and 13½ cents, respectively, in southern California territory.

CALIFORNIA FIELD OPERATIONS BY DISTRICTS FOR FIRST HALF 1932

	Oil wells completed		Oil wells†		Abandoned		New
Northern—	Number	Bbls. daily	Drill'g	Prod'ng	Drlrs.	Prodrs.	Rigs
Buttonwillow Gas Field	6	*.....	2	1	1	...	7
Coalinga	...	.....	...	646	...	1	...
Dudley Ridge Gas Field	1	*.....	3	1	...	...	5
Elk Hills	...	.....	...	205	...	2	...
Fruitvale	16	9,618	5	28	1	...	24
Kern River	3	350	...	930	2	1	2
Kettleman North Dome	5	20,601	11	23	1	...	4
Kettleman Middle Dome	1	1,245	1	....	...	...	1
Lost Hills-Belridge	1	2,500	2	157	...	.	2
McKittrick	...	.....	2	117	...	...	2
Midway-Sunset	4	421	2	1,779	2	3	4
Mount Poso	1	102	1	79	3	...	4
Round Mountain	7	2,081	1	13	...	...	5
Wheeler Ridge	...	.....	...	34	...	...	...
Total	45	36,918	30	4,013	10	13	60
Coastal—							
Elwood	3	1,439	1	40	...	...	2
Goleta Gas Field	1	*.....	1	1	5	.	1
Rincon	...	.....	...	33	...	...	...
San Miguelito	...	.....	1	2	...	...	1
Santa Barbara	1	146	...	4	...	...	1
Santa Maria	...	.....	1	169	1	...	1
Summerland	...	.....	...	60	...	...	...
Ventura Avenue	3	2,629	6	139	...	...	3
Ventura and Newhall	1	15	3	437	12	...	5
Watsonville	...	.....	...	6	...	...	...
Total	9	4,229	13	891	18	...	14
Southern—							
Coyote	5	4,784	3	158	...	5	1
Dominguez	6	11,380	4	61	...	...	7
Fullerton	...	.....	1	357	...	...	...
Huntington Beach	1	100	1	366	2	6	...
Inglewood	3	435	2	212	...	...	3
Lawndale	...	.....	1	6	...	...	...
Long Beach	16	1,845	7	941	18	13	7
Los Angeles-Salt Lake	...	.....	...	259	...	14	...
Montebello	...	.....	1	175	...	a	...
Newport	...	.....	1	1	...	...	...
Playa Del Rey	4	2,300	1	183	8	4	1
Potrero	...	.....	2	11	1	1	1
Richfield	...	.....	...	145	...	3	...
Rosecrans	...	.....	...	64	3	4	1
Santa Fe Springs	1	65	...	478	1	7	1
Seal Beach	2	1,074	1	107	...	4	2
Torrance	3	105	...	367	...	5	1
Whittier	...	.....	...	162	...	...	...
Miscellaneous	...	.....	52	....	53	.	13
Total	41	22,088	77	4,053	86	71	38
Total State	95	63,235	120	8,957	114	84	112

*Gas. †Monthly average.

CALIFORNIA FIELD OPERATIONS BY MONTHS FOR FIRST HALF YEAR, 1932

	Wells comp.		Wells		Abandoned		New
1932—	No.	Bbls. dly.	Drilling	Producing	Drillers	Producers	rigs
January	16	8,789	124	8,727	20	19	15
February	11	5,921	125	8,900	17	8	20
March	16	2,788	126	9,018	28	10	19
April	24	26,038	117	9,118	14	12	25
May	11	4,113	120	9,066	11	6	17
June	17	15,586	108	8,912	24	29	16
Total first half, 1932	95	63,235			114	84	112
Total first half, 1931	167	188,750			119	90	150
Total first half, 1930	379	297,950			143	151	431
Total first half, 1929	473	706,362			134	125	765
Total first half, 1928	351	273,782			104	184	549
Total first half, 1927	531	314,141			171	147	635

CALIFORNIA POTENTIAL DAILY PRODUCTION, 1932

	Marketable	No. of	Curtailed		Total potential	
1932—	daily production	wells producing	Daily production	No. of wells	Daily production	No. of wells
January	501,037	8,727	420,248	6,570	921,285	15,297
February	504,030	8,900	397,798	6,494	901,828	15,394
March	502,449	9,018	392,615	6,382	895,064	15,400
April	517,481	9,118	381,023	6,306	898,504	15,424
May	502,442	9,066	371,398	6,347	873,841	15,413
June	470,632	8,912	388,198	6,490	858,830	15,402
Daily average	499,693	8,957	391,880	6,431	891,573	15,388

TOTAL FLUID STOCKS OF PETROLEUM HELD IN PACIFIC COAST TERRITORY (Bbls.)

1932—	Heavy crude and fuel	Refinable crude	Gasoline	Naphtha distillates	All other stocks	Total all stocks
Jan. 31	98,914,561	42,302,110	16,621,657	4,353,539	8,252,187	170,444,054
Feb. 29	98,806,315	42,167,334	17,818,437	4,788,185	8,001,919	171,582,190
Mar. 31	97,932,316	42,164,553	17,646,369	4,809,449	7,886,300	170,488,987
Apr. 30	98,116,932	42,434,600	18,442,175	4,491,020	7,892,056	171,376,783
May 31	98,859,851	42,621,571	17,912,003	4,776,867	7,578,669	171,748,961
June 30	100,053,802	40,836,891	16,554,338	4,745,948	7,241,079	169,432,058

Crude Production First Half Year Lowest in Six Years

(Continued from Page 33)

DECREASE IN PRODUCTION IN THE PROMINENT POOLS

	Production first 6 months 1932 (bbls.)	Decrease from same period in 1931 (bbls.)
Texas—		
Barbers Hills	3,545,007	727,848
Darst Creek	3,088,678	1,369,339
Pettus	821,200	438,793
Hull	883,801	297,333
Humble	1,107,145	654,374
Pierce Junction	964,439	622,686
Raccoon Bend	891,825	645,544
Refugio	1,942,390	3,559,979
Spindletop	760,909	1,220,827
Bruner	1,568,440	876,351
Luling	1,345,276	194,390
Burkburnett	1,015,579	259,506
Electra	1,448,459	56,825
Archer County	1,962,593	201,855
Wilbarger County	1,752,746	122,949
Young County	1,729,985	430,410
Gray County	5,598,377	1,954,004
Church-Fields-McElroy	3,045,534	383,386
Settles-Roberts-Chalk	3,967,236	804,975
Yates	11,288,305	3,506,335
Hendrick Leck	5,653,158	2,485,673
Sugarland	1,760,115	352,094
Oklahoma—		
Oklahoma City	18,187,268	6,349,697
Wewoka	1,124,950	357,306
Burbank	2,024,946	269,964
Bowlegs	2,175,674	313,122
Little River	3,581,364	2,118,528
Earlsboro district	5,232,530	2,365,899
Mission	1,260,736	127,699
Allen	1,634,951	586,452
Seminole City	2,017,510	442,496
Konawa	933,083	1,279,102
Asher	799,513	728,255
St. Louis-Pearson-Maud	3,741,783	265,784
Cushing-Shamrock	2,135,063	246,819
Bristow	1,517,217	448,736
Healdton	1,929,557	9,801
Sholom-Alechem	2,260,886	156,511
North Louisiana—		
Zwolle	1,166,039	296,747
Caddo	1,335,200	548,817
Arkansas—		
Smackover	4,810,380	1,797,478
Kansas—		
McPherson County	3,706,650	651,964
Wichita area	2,506,701	720,835
El Dorado-Augusta	3,477,268	565,064
Greenwood County	2,423,408	410,467
California—		
Playa Del Rey	3,294,934	2,319,068
Elk Hills	2,294,117	337,178
Kern River	1,771,053	214,297
Midway-Sunset	9,016,397	551,607
Elwood	2,924,566	3,069,665
Ventura Avenue	6,004,956	1,917,162
Fullerton	1,539,208	317,359
Inglewood	2,498,834	262,280
Long Beach	14,458,600	1,567,056
Santa Fe Springs	11,740,034	1,028,625
Seal Beach	2,347,134	306,764
Richfield	1,149,174	92,408
New Mexico—		
Hobbs	5,560,971	495,285
Wyoming—		
Salt Creek	4,008,883	673,660
Total decrease		55,493,433

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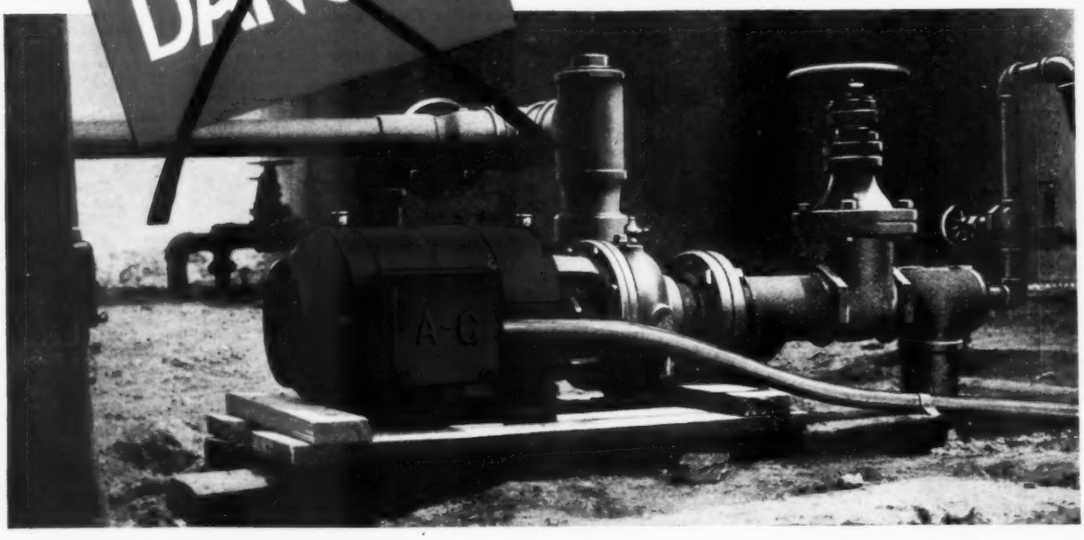

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1932

Oklahoma's Big Potential Production Curtailed; Seven New Pools Opened in Half Year

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

Crude oil curtailment was the outstanding factor in Oklahoma during the first six months of 1932, with the result that production was lower than in the first six months in 1931. Drilling operations declined to the lowest level since the early days of oil development in the state. Notwithstanding curtailment in all branches there were seven new pools opened in the state. Each of the new areas is being controlled as most of the acreage has been unitized or the discovery wells shut down, and the future development will be systematic. New pay horizons were discovered below the regular producing formations in older pools in the state. A large number of old wells were abandoned during the period.

The seven new pools opened in the state included in the order of their discovery were in Kay County, Okmulgee County, Hughes County, Pottawatomie County, Lincoln County and two in western Osage County.

In April a wildcat test in Kay County found a new producing horizon with a good showing of oil. The well was Harris & Haun's No. 1 Watson, SW cor. NW Section 28-28-1w, in which a showing of oil appeared through 3,000 feet of water that was in the hole while it was drilling. The 5-inch casing was landed and cemented at 3,627 feet. The water was then bailed out of the hole and oil rose 2,700 feet in the hole. The owners put the well to pumping and it made 50 bbls. of oil a day. The well is located about 3 miles south of the Braman Field. The majority of the wells in the pools surrounding the new well found oil in the Wilcox sand and the operators may drill this well to the Wilcox sand later.

In April an old gas well in Okmulgee County was drilled deeper to the Wilcox sand and opened a new producing horizon for the area. W. B. Pine's No. 1 Bradford, NW cor. NE NE NE Section 1-12-13, was an old gas well drilled from 2,730 feet to 2,732 feet where it made 135 bbls. initial production. This was the discovery well in the area which later developed into a small Wilcox sand pool.

During the same month another interesting well was drilled from the Wilcox sand down to the Turkey Mountain sand, which opened a new producing horizon. The well was Fred Cusack's No. 1 A. Schadt, NE cor. SE SW Section 15-13-14, Okmulgee County. It first swabbed at the rate of 50 bbls. of oil an hour the first four hours. The well later made 300 bbls. a day when cleaned out. The gas was estimated at 100,000 feet a day. It was prorated to 50 bbls. a day under the state-wide proration rule.

Both of these areas were developed as the acreage was divided among various operators and was in small tracts. The finding of these oil showings led to a seismograph survey of the entire eastern part of the state and it is believed that when the conditions in the oil industry return to normal a drilling campaign will start in attempts to locate the Wilcox and Turkey Mountain sands under the shallower production in that part of the state.

New Pool Near Holdenville

About the same time in April the development in Hughes County began with the finding of a good well in the Holdenville Pool. Mid-Continent Petroleum Corp.'s No. 1 Bruner, NE cor. NW SE Section 9-7-8, was blowing wild into the air after a fishing job, which was later cleaned up and the well drilled deeper into the pay where it started making 25 bbls. of oil an hour. The top of the gas pay was found at 2,900 feet and the oil at 2,934-49 feet. It flowed 330 bbls. of oil the first 15 hours and made 520 bbls. the first 24 hours. The fishing job late in 1931 delayed the completion of the well. It was estimated it made 46,000,000 feet of gas a day at first, and it was out of control about a week before the fishing job was overcome and the well shut in, and later drilled deeper.

Limestone Oil & Gas Co.'s No. 1, C NE NE Section 15-7-8, Hughes County, found the Calvin sand at 1,238-45 feet where the well started flowing at the rate of 5 bbls. an hour. It was a new producing horizon for the area. The operators decided to save this well and skidded the rig about 100 feet and started another test. The area surrounding these wells, located near Holdenville, became active and leasing increased which spread to the taking of leases on town lots in Holdenville. Derricks sprang up on the edge of the town and developments on several of these tracts started at once. A short distance north of the town Eason Oil Co.'s No. 1 Huggins, C NW SE Section 1-7-8, was drilling at the close of June. It was then at approximately 3,100 feet with nothing showing.

Indications point to increasing activity in Hughes County during the summer and fall. A number of tests are under way aside from the townsite campaign in 7-8. About six miles south and west of Holdenville are some excellent wells in the Fish Pool, Seminole County, which was opened in 1931 and was being developed during the first six months of 1932. There are several producing horizons at comparatively shallow depths where producing wells ranging from 100

OKLAHOMA

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
WASHINGTON COUNTY:							
Daily average	4,045	4,044	4,016	3,892	3,919	3,888	
Month	125,395	117,276	124,496	119,760	121,489	116,640	725,056
NOWATA COUNTY:							
Daily average	5,030	5,035	5,011	4,966	4,937	4,876	
Month	155,930	146,015	155,341	148,980	153,047	146,280	905,593
ROGERS COUNTY:							
Daily average	1,447	1,456	1,462	1,469	1,450	1,433	
Month	44,857	42,224	45,322	44,070	44,950	42,990	264,413
OSAGE AND EASTERN KAY COUNTIES:							
Burbank—							
Daily average	11,440	11,375	10,831	10,792	11,100	11,227	
Month	354,640	329,875	335,761	323,760	344,100	336,810	2,024,946
Osage, outside Burbank—							
Daily average	17,528	16,539	17,390	18,115	18,925	20,440	
Month	543,368	479,631	539,090	543,450	586,675	613,200	3,305,414
TULSA AND WAGONER COUNTIES:							
Bird Creek, Owasso, etc.—							
Daily average	3,107	3,097	3,017	2,987	2,990	2,979	
Month	96,317	89,813	93,527	89,610	92,690	89,370	551,327
Red Fork, Sand Springs, Bruner—							
Daily average	565	591	515	527	532	518	
Month	17,515	17,139	15,965	15,810	16,492	15,540	98,461
Bixby, Leonard—							
Daily average	1,024	981	1,035	995	988	991	
Month	31,744	28,449	32,085	29,850	30,628	29,730	182,486
Broken Arrow, Coweta—							
Daily average	757	740	771	763	751	749	
Month	23,467	21,460	23,901	22,890	23,281	22,470	137,469
TULSA, OKMULGEE AND MUSKOGEE COUNTIES:							
Okmulgee and Beggs—							
Daily average	3,157	2,780	3,111	2,914	2,910	2,813	
Month	97,867	80,620	96,441	87,420	90,210	84,390	536,948
Mounds—							
Daily average	889	839	752	801	769	770	
Month	27,559	24,331	23,312	24,030	23,839	23,100	146,171
Bald Hill and Haskell—							
Daily average	1,370	1,433	1,463	1,412	1,391	1,365	
Month	42,470	41,557	45,353	42,360	43,121	40,950	255,811
Morris, Boynton, Cole—							
Daily average	1,173	1,152	1,092	1,090	1,102	1,114	
Month	36,363	33,408	33,852	32,700	34,162	33,420	203,905
OKMULGEE, OKFUSKEE, SEMINOLE, HUGHES AND POTTAWATOMIE COUNTIES:							
Seminole City—							
Daily average	11,286	10,882	11,005	11,233	11,131	10,962	
Month	349,866	315,578	341,155	336,990	345,061	328,860	5,017,510
East Seminole—							
Daily average	1,114	1,156	1,183	1,200	1,238	1,237	
Month	34,534	33,524	36,673	36,000	38,378	37,110	216,219
Bowlegs—							
Daily average	11,802	12,564	11,863	11,682	11,713	12,138	
Month	365,862	364,356	367,753	350,460	363,103	364,140	2,175,674
Little River—							
Daily average	17,717	18,172	18,483	17,129	18,129	17,012	
Month	549,227	526,988	572,973	513,870	561,999	510,360	3,235,417
East Little River—							
Daily average	1,846	2,021	1,943	1,837	1,909	1,853	
Month	57,226	58,609	60,233	55,110	59,179	55,590	345,947
East Earlsboro—							
Daily average	12,069	12,459	12,256	12,184	12,122	12,813	
Month	374,139	361,311	379,936	365,520	375,782	384,390	2,241,078
Earlsboro—							
Daily average	12,938	8,651	13,273	13,624	13,560	13,475	
Month	401,078	250,879	411,463	408,720	420,360	404,250	2,296,750
South Earlsboro—							
Daily average	4,597	4,132	3,875	3,892	3,172	3,238	
Month	142,507	119,828	120,125	116,760	98,332	97,140	694,692
Searight—							
Daily average	3,401	3,272	3,380	3,755	3,532	3,525	
Month	105,431	94,888	104,780	112,650	109,461	105,750	632,960
Mission—							
Daily average	6,949	6,942	6,771	6,788	6,978	7,138	
Month	215,419	201,318	209,901	203,640	216,318	214,140	1,260,736
Carr City—							
Daily average	17,902	18,124	15,877	12,756	11,634	9,987	
Month	554,962	525,596	492,187	382,680	360,654	299,610	2,615,689
Maud—							
Daily average	2,163	2,116	2,065	2,052	2,090	1,961	
Month	67,053	61,364	64,015	61,560	64,790	58,830	377,612
Total Seminole Field—							
Daily average	103,784	100,491	101,974	98,132	97,207	95,339	
Month	3,217,304	2,914,239	3,161,194	2,943,960	3,013,417	2,860,170	18,110,284
Allen—							
Daily average	8,591	9,441	9,046	9,073	8,855	8,924	
Month	266,321	273,789	280,426	272,190	274,505	267,720	1,634,951
Konawa—							
Daily average	5,483	5,081	5,097	5,110	4,934	5,050	
Month	169,973	147,349	158,007	153,300	152,954	151,500	933,083
Asher-Wanette—							
Daily average	4,253	3,744	4,842	4,769	4,382	4,346	
Month	131,843	108,576	150,102	143,070	135,842	130,380	799,813

(Continued on Next Page)

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to 2,500 bbls. a day have been completed, together with some large gas wells.

Fish Pool Important

In January large wells in the south end of the Fish Pool were completed, indicating that the area had future possibilities. The potential production of the pool on January 1 was 4,485 bbls. a day and in May was estimated at 55,000 bbls. a day. It has been tightly curtailed.

The majority of the oil and gas in the Fish Pool is found in the Wapanucka lime, which is actually more like a sand than a lime. The producing area of the field is about 2 miles north and south, but its eastern and western limits are undefined. The producing horizon is found at approximately 2,890-3,100 feet. The other producing horizons include the Booch, Gilcrease and Cromwell sands. Another attractive feature to operators in the area is the low cost of development and the future possibilities in the deeper horizons which have been found productive in other sections in the county and which are known to exist, these being the Hunton lime, Sylvan shale, Simpson sand and the Wilcox sand. No production to date has been found in any of these lower horizons.

The discovery well in the Fish Pool was the Eason Oil Co.'s No. 1 in the SE cor. SW SE Section 19-7-8. It was drilled in 1931.

In Pottawatomie County

In the southern part of Pottawatomie County a new producing horizon was opened in May. A well was drilled on a unitized block of acreage by the Barnsdall Oil Co. and others. It was known as No. 1 Gray, NE cor. SW Section 25-6-4. The well flowed 135 bbls. of oil in one hour from the Simpson sand at 3,478-90 feet. The operation of the well was taken over by the Gypsy Oil Co. and when opened for a production test it made 1,473 bbls. of oil in 21 hours. Under the proration rules the well will be pinched to 50 bbls. a day, and further drilling operations in the area were curtailed as the entire section has been unitized. The well is 6 miles from the nearest production. The pool was called the West Konawa Pool.

No development was started in the area as the result of the new well nearer than a mile from the producer. These distant tests were still drilling and were believed to be running low on structure.

At the close of last year the Carter Oil Co.'s No. 1 Monnett, SW cor. Section 35-7-4, extended the production in the St. Louis Pool to the south, but drilling operations were suspended for 60 days and the well was shut in. All operators in the area agreed not to start operations adjacent to the discovery well. The truce delayed drilling until April 1. The discovery well was estimated at 600 bbls. a day.

The drilling campaign in the Carr City Pool, in Seminole County, which started last year, was over in February, when several of the tests were completed as small producers. The wells were disappointments as all the wells found water with the oil. Several of the wells were given shots but they resulted in small wells.

Drilling the Calvin Sand

The Calvin sand area in the Greater Seminole district is found in practically all of the pools in that field. It is a shallow horizon that was passed by while the operators were drilling the wells to the Wilcox sand. Operators began plugging back some of the exhausted Wilcox sand wells to the Calvin sand horizon during the first six months of the year and in some places it was found to be spotted. In the Wanette Field in southern Pottawatomie County an offset to a large Calvin sand well made a small well. Mid-Continent Petroleum Corp.'s No. 3 Archer, SW cor. SE SE Section 14-6-3, found the Calvin sand at 3,518-45 feet, where the well produced 30 bbls., swabbing. It was a direct offset to the Gypsy Oil Co.'s No. 5 Horn, NW cor. NE NE Section 23-6-3, which produced 792 bbls. from the Calvin sand at 3,459-90 feet.

Greater Seminole operators agreed to restrict operations in the Calvin sand for 60 days. It has been found productive in the Wanette Field and in the East Earlsboro Pool, and in the area west of the Seminole City Field. The first agreement expired May 1 and it was extended for another 30 days until June 1. It is believed that this shallow sand will be found to produce in many parts in the Greater Seminole area when the Wilcox sand wells are exhausted and are plugged back.

Leasing Was Active

Leasing in the Greater Seminole area during the first six months of the year was active. The majority of the companies were securing the leases after the use of seismographs and other geophysical instruments.

The Conservation Pool, in Pontotoc County, was another active area during the first six months of the year. The activity was the result of the Barnsdall Oil Co.'s No. 1 Hart in Section 21-5-6, which made 150 bbls. of oil a day. Drilling activity spread to the adjoining sections where several wells found the stray sand at shallow depths. One of the largest wells completed in the pool was the Freeborn Oil Co.'s No. 1 Brown, SE cor. NE NE Section 28-5-6, which swabbed 195 bbls. of oil the first 24 hours from the sand at 1,721-35 feet.

Pioneer Petroleum Co.'s No. 1 Bayne, SE cor. SW SW Section 15-5-6, in the Conservation Pool, in Pontotoc County, found a stray sand at 1,674-86 feet, where the well made 100 bbls. of oil. The well extends production in the area to the north.

The production in the Conservation area soon became large enough that it was found necessary to prorate the wells to pipe line requirements. In May the pool was producing and shipping approximately 500 bbls. a day which was the pipe line demand. The potential production of the field at that time was approximately 800 bbls. daily. Ten-day gauges were being taken on new wells in the field to determine the potential production of the wells. After the area was prorated the drilling activity was conducted in a conservative manner.

Lincoln a Busy County

Lincoln County had the usual number

OKLAHOMA (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
Pearson-St. Louis—							
Daily average	18,754	17,949	17,452	18,668	19,214	18,853	
Month	581,374	520,521	541,012	560,040	595,634	565,590	3,364,171
Sasakwa—							
Daily average	1,702	1,852	1,879	1,859	1,925	1,906	
Month	52,762	53,708	58,249	55,770	59,675	57,180	337,344
Beebe—							
Daily average	2,508	2,462	2,507	2,473	2,391	2,311	
Month	77,748	71,398	77,717	74,190	74,121	69,330	444,504
Henryetta, Deaner-Lyons, etc.—							
Daily average	1,924	1,828	1,968	1,891	1,845	1,806	
Month	59,644	53,012	61,008	56,730	57,195	54,180	341,769
Wewoka—							
Daily average	6,921	6,998	6,437	5,416	5,540	5,790	
Month	214,551	202,942	199,547	162,480	171,740	173,700	1,124,960
Cromwell—							
Daily average	4,922	4,901	4,690	4,718	4,837	4,940	
Month	152,582	142,129	145,390	141,540	149,947	148,200	879,788
Papoose-Gilcrease—							
Daily average	1,672	1,759	1,747	1,736	1,745	1,739	
Month	51,832	51,011	54,157	52,080	54,095	52,170	315,345
Jarvis-Holm—							
Daily average	189	163	159	160	157	156	
Month	5,859	4 727	4,929	4,800	4,867	4,680	29,862
Weleetka—							
Daily average	755	678	792	717	693	694	
Month	23,405	19,662	24,552	21,510	21,483	20,820	131,432
Holdenville-Fish—							
Daily average	1,468	1,689	2,115	3,614	4,115	4,494	
Month	45,508	48,981	65,565	108,420	127,565	134,820	530,859
Yeager—							
Daily average	356	354	353	349	346	341	
Month	11,036	10,266	10,943	10,470	10,726	10,230	63,671
Miscellaneous—							
Daily average	457	449	426	411	513	560	
Month	14,167	13,021	13,206	12,330	15,903	16,800	85,427
CREEK AND TULSA COUNTIES:							
Glen Pool, Jenks, Kiefer—							
Daily average	3,827	3,688	4,339	3,965	3,949	3,914	
Month	118,637	106,952	134,509	118,950	122,419	117,420	718,887
Picket Prairie, Sapulpa and Fisher—							
Daily average	2,268	2,318	2,223	2,227	2,219	2,221	
Month	70,308	67,222	68,913	66,810	68,789	66,630	408,672
Cushing, Shamrock—							
Daily average	11,943	11,884	11,219	11,715	11,695	11,947	
Month	370,233	344,636	347,789	351,450	362,545	358,410	2,135,063
Bristow, Kellyville and Depew—							
Daily average	8,555	8,236	8,287	8,395	8,311	8,316	
Month	265,205	238,844	256,897	249,150	257,641	249,480	1 517,217
Eastern Bristow or Slick—							
Daily average	3,495	3,301	3,195	3,160	3,171	3,166	
Month	108,345	95,729	99,045	94,800	98,301	94,980	591,200
PAWNEE COUNTY:							
Cleveland—							
Daily average	1,431	1,472	1,469	1,451	1,446	1,439	
Month	44,361	42,688	45,539	43,530	44,826	43,170	264,114
Keystone-Mannford—							
Daily average	2,526	2,455	2,126	2,117	2,123	2,100	
Month	78,306	71,195	65,906	63,510	65,813	63,000	407,730
Jennings—							
Daily average	2,177	2,046	1,778	1,810	1,802	1,779	
Month	67,487	59,334	55,118	54,300	55,862	53,370	345,471
Otoe—							
Daily average	633	621	644	637	636	631	
Month	19,623	18,009	19,964	19,110	19,716	18,930	115,352
Ralston-Mashan—							
Daily average	98	108	109	106	101	99	
Month	3,038	3,132	3,379	3,180	3,131	2,979	18,830
PAYNE COUNTY:							
Yale, Quay, Ingalls and Magnolia—							
Daily average	3,637	3,639	3,583	3,570	3,493	3,504	
Month	112,747	105,531	111,073	107,100	108,283	105,120	649,854
North Cushing—							
Daily average	1,448	1,391	1,143	1,144	1,127	1,116	
Month	44,888	40,339	35,433	34,320	34,937	33,480	223,397
Mehan-Ripley—							
Daily average	530	512	494	503	498	494	
Month	16,430	14,848	15,314	15,090	15,438	14,820	91,940
OKLAHOMA COUNTY:							
Oklahoma City—							
Daily average	110,883	83,983	97,260	102,646	102,108	101,820	
Month	3,427,373	2,435,507	3,015,060	3,079,380	3,165,348	3,054,600	18,187,268
LINCOLN COUNTY:							
Stroud—							
Daily average	587	577	561	567	562	557	
Month	18,197	16,733	17,391	17,010	17,422	16,710	103,463
Davenport—							
Daily average	860	812	862	814	811	815	
Month	26,660	23,548	26,722	24,420	25,141	24,450	150,941
Kendrick—							
Daily average	115	104	109	111	112	111	
Month	3,565	3,016	3,379	3,330	3,472	3,330	20,092
Chandler—							
Daily average	4,184	3,948	3,989	3,914	3,898	3,892	
Month	129,704	114,492	123,659	117,420	120,838	116,760	722,873
Section 1-15-6—							
Daily average	.....	.....	.....	.....	.....	151	
Month	.....	.....	.....	.....	.....	4,530	4,530
KAY, GRANT AND NOBLE COUNTIES:							
Blackwell—							
Daily average	733	772	737	729	731	726	
Month	22,723	22,388	22,847	21,870	22,661	21,780	134,269
Vernon—							
Daily average	411	487	459	466	458	454	
Month	12,741	14,123	14,229	13,980	14,198	13,620	82,891
Otstot—							
Daily average	892	903	876	862	851	846	
Month	27,652	26,187	27,156	25,860	26,381	25,380	158,616

(Continued on Next Page)

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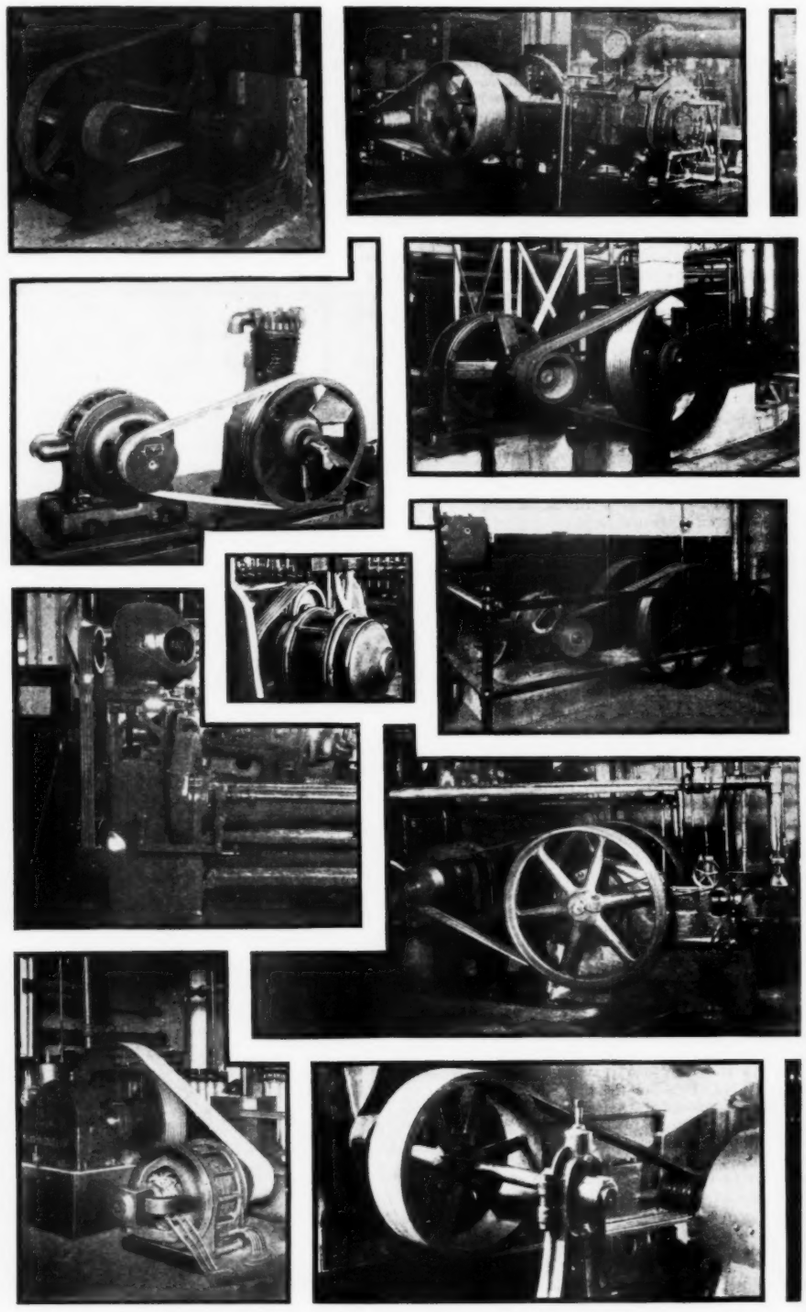

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of tests, the majority of which were dry holes. One new pool was found in the county along the Creek County line by drilling an old gas well deeper. The Pure Oil Co.'s No. 1 Unglesby-Pinkston, SW cor. SE SE NW Section 1-15-6, was an old gas well drilled about seven years ago and completed for 11,000,000 feet of gas a day at a total depth of 3,655 feet. Early in 1931 a seismograph survey was made of the area and a Wilcox sand structure was indicated. The company decided to drill its well deeper in April and it found the Wilcox sand at 3,700-05 feet, where it started spraying oil and making approximately 21,000,000 feet of gas a day. The casing was cemented at 3,700 feet and the well was then shut in awaiting a pipe line connection. The well is northeast of the Stroud Field, which had producers in the Peru, Bartlesville and Wilcox sand.

The second well in the county line pool was the Gypsy Oil Co.'s No. 1 Pinkston, SE cor. NW Section 1-15-6, the west offset to the discovery well, which was completed as a gas well in February, 1925, making 13,000,000 feet of gas a day from sand at 3,650-60 feet. It was drilled to a total depth of 3,693 feet, where it made 14 bbls. of oil an hour on a two-hour test and was then shut in for a pipe line connection. Both of these wells are believed to be on the edge of the Wilcox sand pool, which will be developed during the last half of the year. The pool is several miles from a pipe line and will not be produced until a pipe line connection is made.

Other Lincoln County Tests

Barnsdall Oil Co.'s No. 1 Taylor, C SW NW Section 17-14-5, Lincoln County, was completed in February. It found water in the Wilcox sand at 4,706-35 feet. The lower Wilcox sand was found at 4,744-48 feet. It was plugged as a dry hole after being plugged back to the shallow horizons.

Hilton Phillips and others' No. 1 Phillips, SW cor. NW Section 2-14-3, found a showing of oil in the Viola lime at 5,045-53 feet and after being drilled to the Wilcox sand at a total depth of 5,084 feet, where it found water, it was abandoned.

Sovereign Oil Co.'s No. 1 Selacek, NE cor. SE Section 3-12-5, Lincoln County, found water in the Wilcox sand at 4,563-71 feet. The well found a showing of oil in the Viola lime at 4,476-89 feet. The oil was black and tested 29 degrees A.P.I. The well was also plugged back to the shallow horizons and tested and later plugged and abandoned.

Osage County Revived

Two wildcat tests in the western part of Osage County made large producers and were believed to have opened new pools in May and June. The first wildcat to find oil was the Peters Petroleum Corp. and Producers & Refiners Corp.'s No. 1, in the SE cor. NW NE Section 24-24-7, east of the Naval reserve. The test found oil and gas in all the upper sands. The Hominy sand at 2,732-37 feet yielded approximately 150 bbls. of oil a day and the Siliceous lime at 2,768-93 feet yielded 1,000 bbls. the first five hours, when it filled all the tankage on the lease and was shut in. The well was located about 1½ miles from the nearest production in the county.

The second wildcat test to find oil in Osage County was the Bay Oil Co.'s (A. G. Oliphant's) No. 1 well, NW cor. NE NW Section 13-23-7, which started flowing at the rate of 120 bbls. of oil an hour. After tankage had been erected on the lease it made approximately 1,200 bbls. of oil a day. The oil was found in the Hominy sand at 2,828-54 feet. It was approximately 6 miles south of the Peters Petroleum Corp. and others' well and 3½ miles from the nearest other production in the county. At the end of June both of these wells were being prorated to 50 bbls. a day under the proration rule in the State. Additional development was expected to start in the vicinity of these wells as most of the offset acreage was held by oil companies with pipe lines in the county.

The Oklahoma City Field was the most active and the most important field in the State during the first half of the year. The field began the year with an estimated potential of 3,170,000 bbls. of oil in one day from a total of 824 wells and on June 30 it was credited with a potential of 3,650,000 bbls. in one day from 916 wells.

In February a new umpire was appointed to handle the production from the field after considerable opposition developed as to the manner in which the committee of three had been handling the field since the military shutdown last August. Ray M. Collins was appointed to take the place of the committee, W. N. Stokes, C. O. Rison and P. G. Patton, and the umpire, Otto Bradford.

Several interesting situations developed in the Oklahoma City Field during the first half of the year. Some operators were accused of producing more oil than the allowable and new plans were offered providing for the proportions of production to be taken from the various producing formations in the field. It was claimed that the existing schedule was not in accord with ratable taking.

Changes were made in the proration rules. Producers had formerly been permitted to open their wells eight hours before shutting them down for a 65-day period required by the rules. The eight-hour production was not considered when the well was put on production under the proration rules. This was changed so that the eight-hour production was charged against the well and subtracted from its allowable when it was put on production after the 65-day shut-in period.

The other change permitted the operators to shift allowable production from wells with high gas-oil ratio to wells of low gas-oil ratio on the same lease. This prevented wastage of a huge volume of gas and conserved reservoir gas energy. These changes were beneficial to all operators in the field.

During the first six months of the year the Oklahoma City Field presented an unsatisfactory situation to the majority of operators with production. Part of this situation was corrected by legislation but it was impossible to remedy the

OKLAHOMA (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
Deer Creek—							
Daily average	475	478	461	461	457	453	
Month	14,725	13,862	14,291	13,830	14,167	13,590	84,465
Ponca City—							
Daily average	387	475	446	439	440	436	
Month	11,997	13,775	13,826	13,170	13,640	13,080	79,488
Mervine—							
Daily average	207	210	190	189	183	184	
Month	6,417	6,090	5,890	5,670	5,673	5,520	35,260
Braman—							
Daily average	1,665	1,714	1,662	1,674	1,704	1,731	
Month	51,615	49,706	51,522	50,220	52,824	51,930	307,817
Hubbard—							
Daily average	931	966	900	893	890	930	
Month	28,861	28,014	27,900	26,790	27,590	27,900	167,055
Thomas—							
Daily average	434	427	395	404	447	427	
Month	13,454	12,383	12,245	12,120	13,857	12,810	76,869
Garrett—							
Daily average	25	26	27	25	24	26	
Month	775	754	837	750	744	780	4,640
Tonkawa—							
Daily average	4,998	4,906	4,895	4,859	5,109	5,216	
Month	154,938	142,274	151,745	145,770	158,379	156,480	909,586
Billings—							
Daily average	231	231	211	210	207	203	
Month	7,161	6,699	6,541	6,300	6,417	6,090	39,208
Perry and Miscellaneous—							
Daily average	1,261	1,315	1,338	1,310	1,292	1,260	
Month	39,091	38,135	41,478	39,300	40,052	37,800	235,856
GARFIELD COUNTY:							
Garber—							
Daily average	2,856	2,740	3,122	2,965	3,018	3,016	
Month	88,536	79,460	96,782	88,950	93,558	90,480	537,766
LOGAN COUNTY:							
Lovell—							
Daily average	464	400	415	404	460	458	
Month	14,384	11,600	12,865	12,120	14,260	13,740	78,969
Marshall—							
Daily average	2,295	2,360	2,213	2,244	2,285	2,294	
Month	71,145	68,440	68,603	67,320	70,835	68,820	415,163
CARTER COUNTY:							
Healdton—							
Daily average	10,605	10,550	10,604	10,540	10,628	10,682	
Month	328,755	305,950	328,724	316,200	329,468	320,460	1,929,557
Hewitt—							
Daily average	5,333	5,648	5,379	5,518	5,709	5,715	
Month	165,323	163,792	166,749	165,540	176,979	171,450	1,009,833
Graham—							
Daily average	1,970	2,075	1,849	1,906	1,990	1,979	
Month	61,070	60,175	57,319	57,180	61,690	59,370	356,804
Fox—							
Daily average	1,730	1,862	1,666	1,660	1,654	1,664	
Month	53,630	48,198	51,646	49,800	51,274	49,920	304,468
Sholom Alechem-Tatum—							
Daily average	12,643	12,406	12,176	12,333	12,363	12,616	
Month	391,933	359,774	377,456	369,990	383,253	378,480	2,260,886
STEPHENS AND COTTON COUNTIES:							
Loco-Milroy—							
Daily average	1,247	1,230	1,248	1,236	1,229	1,219	
Month	38,657	35,670	38,688	37,080	38,099	36,570	224,764
Comanche—							
Daily average	1,518	1,420	1,434	1,440	1,436	1,590	
Month	47,058	41,180	44,454	43,200	44,516	47,700	268,108
Duncan—							
Daily average	3,171	3,218	3,343	3,311	3,514	3,465	
Month	98,301	93,322	103,633	99,330	108,934	103,950	607,470
Walters—							
Daily average	1,659	1,822	1,801	1,773	1,819	1,808	
Month	51,429	52,838	55,831	53,190	56,389	54,240	323,917
Kilgore—							
Daily average	223	219	216	214	211	212	
Month	6,913	6,351	6,696	6,420	6,541	6,360	39,281
JEFFERSON COUNTY:							
Hambro, etc.—							
Daily average	1,976	2,143	1,957	1,939	1,942	1,939	
Month	61,256	62,147	60,667	58,170	60,202	58,170	360,612
6s-6w—							
Daily average	52	45	.....	43	44	42	
Month	1,612	1,305	.....	1,290	1,364	1,260	6,831
CADDO COUNTY:							
Cement—							
Daily average	2,204	1,463	207	1,480	1,497	1,476	
Month	68,324	42,427	6,417	44,400	46,407	44,280	252,255
GARVIN COUNTY:							
Robberson—							
Daily average	1,616	1,604	1,582	1,579	1,563	1,550	
Month	50,096	46,516	49,042	47,370	48,453	46,500	287,977
GRADY COUNTY:							
Knox—							
Daily average	1,855	1,930	1,911	1,890	1,875	1,869	
Month	57,505	55,970	59,241	56,700	58,125	56,070	343,611
BECKHAM COUNTY:							
Sayre—							
Daily average	11	12	11	10	11	11	
Month	341	348	341	300	341	330	2,001
MARSHALL COUNTY:							
Madill—							
Daily average	233	257	245	247	254	260	
Month	7,223	7,453	7,595	7,410	7,874	7,800	45,355
Daily average	449,779	407,110	419,316	423,934	424,820	425,241	423,702
Total first six months 1932	13,664,149	11,806,190	12,998,796	12,718,020	13,169,420	12,757,230	77,113,805
Total first six months 1931	14,850,953	13,531,980	16,627,687	16,815,990	17,333,867	16,678,200	95,838,677
Total first six months 1930	20,802,984	17,977,624	19,115,406	19,541,310	20,587,503	19,754,700	117,779,527
Total first six months 1929	22,575,874	20,464,164	20,838,262	20,235,390	21,345,453	20,561,112	126,020,255
Total first six months 1928	20,978,320	19,294,426	20,162,524	19,096,920	19,443,355	18,482,981	117,458,526
Total first six months 1927	19,035,426	19,752,348	22,480,921	22,208,130	23,258,463	22,830,330	129,565,618
Total first six months 1926	13,674,813	12,392,616	14,312,886	14,468,190	14,507,008	14,073,510	85,428,423

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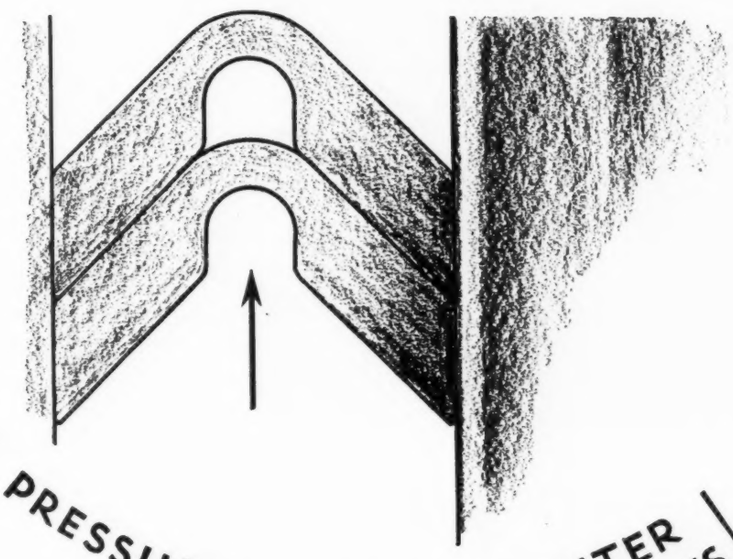

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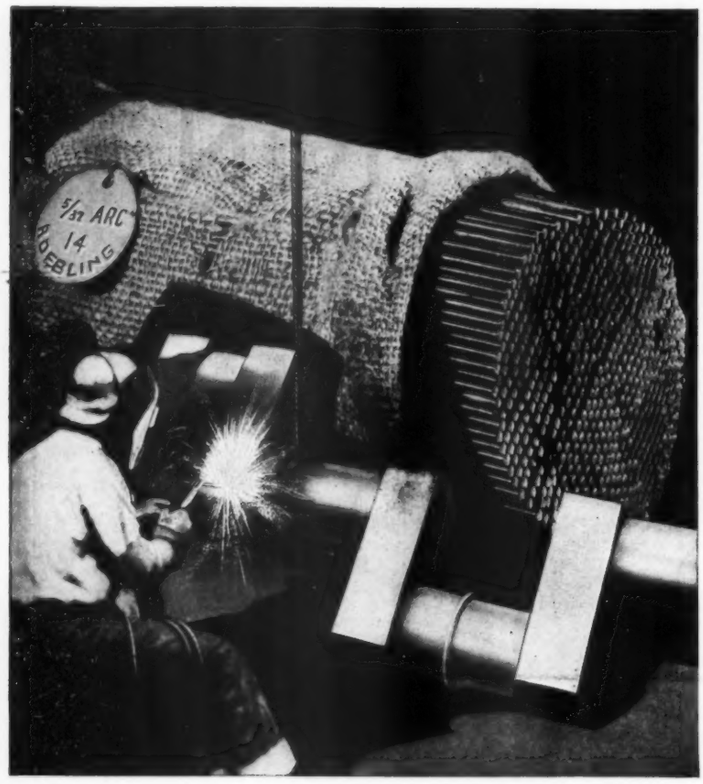

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ROEBLING

THE CUSTOM-MADE WELDING WIRE—FOR EXACTING WELDERS

entire condition because of the competition from the East Texas Field.

In February a water report showed that the water was spreading in the Wilcox sand zone. On the first of January there were only two Wilcox sand wells in the field making water and the number increased to five on February 1. These water wells were located in the north and the south ends of the field. By the end of June the number had increased to 10 wells. In the lower Simpson sand horizon a total of 92 wells were showing water on January 1 and this number increased to 99 wells in February, and 131 wells on June 30. The number of wells making water in the Siliceous lime wells were plugged back to the shallower horizons and completed as gas wells. There were 195 wells in the field making water on June 30 out of 916 wells completed.

An important extension well was completed in the Oklahoma City Field in March, which gave operators with leases in the southwestern part of the field renewed energy. A number of tests were started all of which resulted in producing wells. The producing area was extended by R. A. McArthur's No. 1 Pruitt, NE cor. NW SE, Section 22-11-3w, on the southwest edge of the field. It made 330 bbls. of oil in nine minutes before cutting the connections. It was located about a quarter of a mile west of the nearest other production and is still believed to be on the west edge of the Wilcox sand production. It is located on townsite lots all of which were leased prior to the drilling of the well.

The field was further extended in April by Phillips Petroleum Co.'s No. 1 Berg, NE cor. SW, Section 26-11-3w, which made 50 bbls. of oil in two hours. The casing was cemented at 6,412 feet and the total depth is 6,595 feet. It extended production a half mile to the south and proved the Wilcox sand extends around the edge of the field from the north end to the south part of the field.

Oil in Cleveland Sand

The discovery of a shallow sand producer in April, on the west side of the field, indicated to the operators that when the Wilcox sand production is exhausted and ceases to yield oil, the wells can be plugged back to the shallow horizon. The new producing horizon opened in the southwest sector of the Oklahoma City Field, was found in Indian Territory Illuminating Oil Co.'s No. 2 Little, NW cor. NE NE, Section 27-11-3w, which swabbed 1,134 bbls. of oil in 22½ hours from the Cleveland sand at 5,771-88 feet. The 9-inch casing was cemented at 5,771 feet. The well is an offset to several Wilcox sand producers and the company decided to mud off the oil showing in the Cleveland sand and drill the well to the Wilcox sand horizon. It was believed that the company fears that a drilling campaign might develop in the vicinity. It is offset by platted tracts to the north with several wells located on five-acre units. It later made 7,160 bbls. in six hours from the Wilcox sand at 6,488-6,590 feet.

The southwest extension area in the Oklahoma City Field was proving disappointing as the half year closed, and it was believed the incursion of water in some of the wells retarded developments. Skelly Oil Co.'s No. 1 Ledbetter, NE cor. NW NE, Section 22-11-3w, extended production a quarter of a mile to the west, started showing 5 per cent water while being given a potential test. When the well was first completed it made 1,282 bbls. of oil in four hours and when opened about a week later it only made 138 bbls. an hour for three hours. The oil was found in the Wilcox sand at 6,455-93 feet.

In April the Independent Pipe Line Co., a subsidiary of Phillips Petroleum Co., completed its extension pipe line and started running oil through it. It runs from the Oklahoma City Field to the company's refinery at Okmulgee, a distance of approximately 42 miles. In May a meter was installed on this pipe line with the view of checking shipments of crude oil from the field against the tank measurements. The checking of the oil shipped in the pipe line was conducted by the umpire's staff and the employes of the Phillips Petroleum Co.

Stripper Wells Find Relief

Stripper well owners in northeastern Oklahoma joined in the movement of January, 1932, to seek relief from statewide proration. A 10 per cent proration order applying to all the old fields had been in effect since January 1. A hearing before the Corporation Commission was held January 27, and all restrictions were removed. It was estimated that the State has 56,000 stripper wells. For example, Rogers County's 4,000 wells average only 0.35 bbl. of oil a day while other counties with stripper wells average from 0.55 to 1.15 bbls. a day per well.

New Pay in Duncan Field

A new producing horizon was found southwest of Duncan in Stephens County, in January. Continental Oil Co.'s No. 1 Dare, NE cor. SW SW, Section 2-2s-8w, unexpectedly found a sand at 1,435-40 feet from which the well made 35,000,000 feet of gas a day and sprayed 25 bbls. of oil. The well was located in proven territory and was drilled to protect ownership of a lease.

Production in the Tatums Field in Carter County was extended to the east in March by Amos Drilling Co.'s No. 1 Short, SW cor., Section 18-1s-2w, which swabbed 72 bbls. of oil an hour and then flowed at the rate of 500 bbls. a day. Production was found in a series of sands at 1,852-2,015 feet. This well proved considerable territory which may be drilled later in the year.

Important Sales

There were only a few sales during the first six months of the year of any importance, one was the Tidal Oil Co.'s sale of 400 stripper wells in Washington County to Fees & Goyt, of Iola, Kans. The wells have a settled production of 250 bbls. a day and were located in the vicinity of Dewey.

Ramsey Petroleum Co. sold its undivided one-half interest in No. 1 Messer, C SW SW, Section 32-14-3w, Oklahoma City, and in the block of leases surrounding the well, to the Mid-Kansas Oil & Gas Co. in January. The well was completed about 18 months ago and has been shut in since that time. No consideration was announced, but it was believed that part was cash and the balance in oil when produced.

OKLAHOMA
Summary of Wells Completed First Six Months 1932

County—	Comp.	Prod.	Dry	Gas
Carter	8	2,498	2	0
Hughes	9	2,986	1	3
Pontotoc	15	1,055	4	0
Comanche	1	0	1	0
Kay	2	335	1	0
Bryan	2	0	2	0
LeFlore	2	0	2	0
Murray	1	0	1	0
Seminole	31	29,752	3	0
Greer	2	0	2	0
Marshall	13	52	9	1
Coal	2	0	2	0
Love	3	0	3	0
Muskogee	26	174	15	4
Stephens	26	1,119	8	5
Cotton	1	0	1	0
Creek	95	3,816	39	16
McIntosh	3	0	3	0
Okfuskee	14	343	3	4
Tulsa	15	110	8	1
Latimer	1	0	0	1
Garvin	1	0	1	0
Oklahoma	61	270,908	2	0
Okmulgee	37	488	14	9
Pawnee	13	106	7	2
Wagoner	21	185	12	3
Lincoln	5	227	3	1
Jefferson	3	50	1	0
Osage	14	1,422	5	0
Payne	2	8	1	0
Pittsburg	4	0	1	3
Pottawatomie	8	5,104	1	0
Beckham	1	0	1	0
Caddo	1	75	0	0
Ttl. 6 mos. 1932	445	320,573	159	57
Ttl. 6 mos. 1931	714	1,431,798	247	117
Difference	269	1,111,225	88	60
Summary by Months				
January	63	56,497	25	11
February	63	76,654	17	16
March	79	38,125	26	12
April	79	55,137	32	7
May	87	63,543	31	6
June	74	30,617	28	5
First half 1932	445	320,573	159	57
First half 1931	714	1,431,798	247	117
First half 1930	1,898	2,470,015	534	191
First half 1929	1,740	488,960	618	149
First half 1928	1,821	328,155	657	292
First half 1927	2,365	963,276	727	247
First half 1926	2,545	380,359	789	270
First half 1925	2,436	458,049	721	228

Development of Many Kansas Pools Held Up Awaiting Better Demand for Crude Oil

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Owing to the restricted market outlet for crude oil from Kansas during the first six months of the year, the predicted wildcat campaign and development in the central western part of the State was delayed. Drilling operations were mostly confined to the areas around producing wells. Several new pools were found and several of the one-well pools found last year were partly developed. Each of these areas proved to be productive and most of the work completed the first half of the year was in and around them.

At the beginning of the new year there were 11 different pools along the Ellsworth-Barton arch in central western Kansas. Only four of these pools had pipe line outlets at that time. During the first six months of this year all but two of these areas were connected a part of the time.

In January the Stanolind Crude Oil Purchasing Co. started extending its facilities to the various midwestern areas, thereby providing an outlet for the oil. This was done to test the production from these new wells and to determine their staying qualities. The company installed several loading racks at nearby railroads and shipped the crude out in tank cars. The pools found their production in Silicious lime, a formation lying on top of a granite mountain. A similar condition exists in the Eldorado and Augusta Pools, which also produce chiefly from the Silicious lime, on a granite ridge.

It was soon found that the production was more than market requirements and the company withdrew as a purchaser in May. By this there were 31 wells completed along the Barton-Ellsworth arch with a potential of better than 42,000 bbls. a day. The area covered by the arch was believed to be 66 miles long from north to south and covered parts of four counties, Ellsworth, Rice, Barton and Stafford. It extended west to Rush County. The conditions along the arch, coming from the Silicious lime, were studied by several geologists and they indicated that they believed the average yield per acre of the district would be in the neighborhood of 8,000 bbls. Many expressed the opinion that the area would be a series of pools, each covering only a small amount of acreage. This area was active not only from a development standpoint but in surveys from seismograph instruments. It was said that all the available acreage along the flanks of the arch was under lease.

Development Held Back

A wildcat drilling campaign was freely predicted early in the year along the Ellsworth-Barton arch. Some of the major oil companies have extensive holdings there and smaller companies and individual operators with acreage were anxious to test their holdings, but owing to the restricted market outlook of wells already completed only a comparatively few wells were drilled.

The above areas were the most important in the State during the first six months. In the majority of cases these areas were extended and further developed by new wells.

The only area opened during the first six months of this year was the McPherson Pool in McPherson County. It was the seventh pool opened in the county. The discovery well was Shell Petroleum Corp.'s No. 1 Johnson, SW cor. SE Section 35-19-3w, which found oil and gas in the chat at 2,984-94 feet. It was first showing about 1,000,000 feet of gas a day and was shut in. The crew was preparing to drill it deeper when it suddenly blew out and caught fire. The flow of gas unexpectedly increased and broke through the 12-inch and 14-inch casing. The well was brought under control after fire had destroyed the derrick. This test was located about 6 miles from the nearest production. It was later drilled to 3,007 feet, still in the chat formation, and started making 10,000,000 feet of gas a day and 120 bbls. of oil. It is on a block of 1,120 acres and the company planned an orderly development campaign. Other companies owning acreage in the vicinity of the well were the Mid-Kansas Oil & Gas Co., Indian Territory Illuminating Oil Co. and The Texas Company.

The productive territory around the well was extended by additional wells. The fifth well in the field was a half-mile extension to the northeast of the discovery well. It was Shell Petroleum Corp.'s No. 1 Lawrence, SE cor. NE Section 35-19-3w, which was completed for 24,000,000 feet of gas a day and 265 bbls. of oil in five hours from the chat at 2,974-3,005 feet.

The largest well completed in the McPherson Pool was the Mid-Kansas Oil & Gas Co.'s No. 1 Bridgen, NE cor. NW SE Section 2-20-3w, which was completed in May, for 3,000 bbls. a day after swabbing 1,495 bbls. of oil in 12 hours from chat at 2,976-3,030 feet.

The production was extended to within a few hundred feet of the townsite of McPherson, which led operators to seek drilling permits on lots in the southeast edge of the townsite. The well was L. W. Prunty and others' No. 1 Kasey, SE cor. NW NW Section 35-19-3w, which was estimated at 750 bbls. a day from the chat.

The development of the area was retarded owing to the lack of a pipe line outlet for the oil and gas. Just what the pool will develop into is still guesswork. Many believe the Viola lime will produce in some parts of the area.

The Ritz-Canton-Decker Pool in McPherson County continued in the limelight with new wells extending the Viola lime and the chat producing formations. In January the Viola lime area was extended a half mile north by the J. H. Miller, Johnson and Gypsy Oil Co.'s No. 1 McGill, SE cor. NW Section 20-19-1w. The Viola lime was found at 3,416-28 feet, where it filled up 2,500 feet with oil in a few minutes. The well was given a potential of 1,370 bbls. a day. It forced the drilling of three offsets. Two of the offsets were owned by the Darby Petroleum Corp. and one by the Sinclair Prairie Oil Co.

State's Largest Well

In February the largest producer in the State this year was completed in the Ritz-Canton-Decker Pool. It made 5,600 bbls. of oil in 24 hours. The well was G. P. Dickey and others' No. 2 Decker, NW cor. SW SE Section 35-19-2w, on the west edge of the field. The log shows the chat to be considerably higher

KANSAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
SEDGWICK COUNTY:							
Wright—							
Daily average	4,186	3,915	4,085	4,076	3,695	3,710	
Month	129,766	113,535	126,635	122,280	114,545	111,300	718,061
Greenwich—							
Daily average	2,736	2,486	2,676	2,660	3,082	3,079	
Month	84,815	72,094	82,956	79,800	95,542	92,370	507,578
Robbins—							
Daily average	251	218	221	219	204	206	
Month	7,161	6,322	6,851	6,570	6,324	6,180	39,408
Eastborough—							
Daily average	7,115	6,642	5,876	5,919	4,774	4,746	
Month	220,565	192,618	182,156	177,570	147,994	142,380	1,063,283
Miscellaneous—							
Daily average	814						
Month	25,234	874	1,173	1,065	978	972	
		25,346	36,363	31,950	30,318	29,160	178,371
MARION COUNTY:							
Florence-Urschel—							
Daily Average	148	173	154	160	174	171	
Month	4,588	5,017	4,774	4,800	5,394	5,130	29,703
Peabody—							
Daily average	384	396	427	399	378	383	
Month	11,904	11,484	13,237	11,970	11,718	11,490	71,803
Covert-Sellers—							
Daily average	439	431	305	311	389	382	
Month	13,609	12,499	9,455	9,330	12,059	11,460	68,412
Lost Springs—							
Daily average	561	561	538	529	496	486	
Month	17,391	16,269	16,678	15,870	15,376	14,580	96,164
Davis—							
Daily average	465	492	472	461	467	464	
Month	14,415	14,268	14,632	13,830	14,477	13,920	85,542
BUTLER COUNTY:							
Elbing—							
Daily average	1,538	1,491	1,505	1,496	1,609	1,547	
Month	47,678	43,239	46,655	44,880	49,879	46,410	278,741
Potwin—							
Daily average	321	400	306	314	302	307	
Month	9,951	11,600	9,486	9,420	9,362	9,210	59,029
South Augusta—							
Daily average	856	769	837	811	836	831	
Month	26,536	22,301	25,947	24,330	25,916	24,930	149,960
North Augusta—							
Daily average	886	837	802	813	860	854	
Month	27,466	24,273	24,862	24,390	26,660	25,620	153,271
Towanda—							
Daily average	1,359	1,378	1,410	1,390	1,381	1,383	
Month	42,129	39,962	43,710	41,700	42,811	41,490	251,802
Cameron-Robinson—							
Daily average	463	492	439	441	449	443	
Month	14,353	14,268	13,609	13,230	13,919	13,290	82,669
Sluss—							
Daily average	129	122	136	127	142	137	
Month	3,999	3,538	4,216	3,810	4,402	4,110	24,075
Nuttle-Koogler—							
Daily average	2,354	2,301	2,327	2,311	2,325	2,316	
Month	72,974	66,729	72,137	69,330	72,075	69,480	422,725
Wilson-Dunkle—							
Daily average	1,276	1,199	1,261	1,210	1,286	1,267	
Month	39,556	34,771	39,091	36,300	39,866	38,010	227,594
Eldorado—							
Daily average	6,062	5,793	5,845	5,819	5,888	5,869	
Month	187,922	167,997	181,195	174,570	182,528	176,070	1,070,282
Smock—							
Daily average	163	154	165	160	171	166	
Month	5,053	4,466	5,115	4,800	5,301	4,980	29,715
Leon-Weaver—							
Daily average	2,589	2,447	2,366	2,373	2,495	2,388	
Month	80,259	70,963	73,346	71,190	77,345	71,640	444,743
Fox-Bush—							
Daily average	782	688	720	716	808	760	
Month	24,242	19,952	22,320	21,480	25,048	22,800	135,842
Douglass—							
Daily average	95	95	97	94	103	99	
Month	2,945	2,755	3,007	2,820	3,193	2,970	17,690
Keighly—							
Daily average	267	325	280	274	338	310	
Month	8,277	9,425	8,680	8,220	10,478	9,300	54,380

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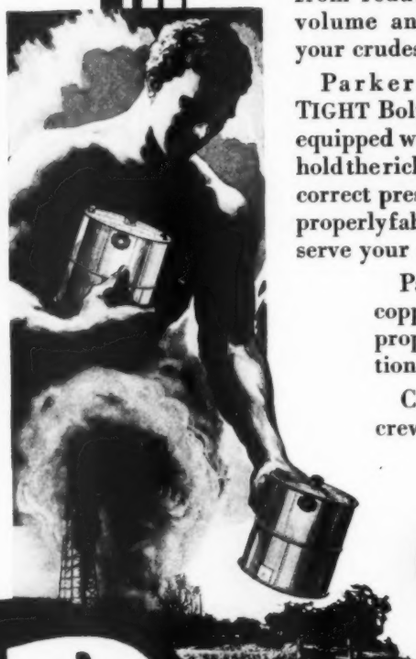

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than in other wells in the vicinity. Gas was found at 2,934 feet and oil at 2,956 feet. This well is the east offset to H. Rosenthal's No. 1 Deilman in Section 35-19-2w, which was a 2,000-bbl. producer from the chat, which extended production a half mile to the west. On the same lease G. P. Dickey's No. 1 Decker, SE cor. Section 35-19-2w, was completed last year for 6,722 bbls. in 24 hours.

Production was again extended in April by the Twin Drilling Co.'s No. 1 Fletcher, SW cor. NW SE Section 16-19-1w, in the northeast part of the pool. The chat was found at 2,931 feet, at which depth it began spraying oil and showing gas at the rate of 1,000,000 feet a day. It was shut in and later made 800 bbls. of oil. It extended production a quarter of a mile to the north.

Production was extended in the southeastern part of the field by a Viola lime well. W. C. McBride, Inc.'s No. 2 Lovett, C NE SW Section 13-19-2w, found water in the chat formation at 2,913-3,007 feet and was drilled deeper to the Viola lime at 3,399-3,410 feet, where it made 415 bbls. of oil in 10 hours.

The field was steadily developed during the first six months of the year notwithstanding the strict curtailment of production which permitted only 11 per cent of the potential in February and which declined to 6 per cent of the potential in June.

Attempts to extend the production to the southeast from the present limits of the Ritz-Canton-Decker Field met with failure. Olson Drilling Co. and Stanolind Oil & Gas Co.'s No. 1 in the NW cor. Section 34-19-1w, and Homer Detrick and Stanolind Oil & Gas Co.'s No. 1 Kelly, NW cor. SW NW Section 34-19-1w, were dry.

Harvey County Becomes Important

Harvey County has finally become an important producing area after many years of wildcatting. The largest oil well ever completed in the county, making 100 bbls. an hour, was brought in in June. It was W. C. McBride, Inc.'s No. 1 Freesen, NW cor. SW Section 20-22-3w, and was located about 100 feet south of the discovery well in the area, which was completed last December on a church lot and has been pumping around 300 bbls. a day since, until it was drilled deeper. Both wells produce from the Hunton lime at 3,505-13 feet. The new well was shut in after a production test, awaiting a pipe line connection.

The discovery well in the area, the first Hunton lime producer in the State, was F. Hollow's No. 1 Church Acre, SW cor. NW Section 20-22-3w, which was first completed in December, 1931, for 450 bbls. of oil per day and was later drilled deeper to 3,512 feet, where it made 1,450 bbls. of oil in 24 hours.

The production in the pool was extended one location to the north by Stanolind Oil & Gas Co.'s No. 1 in approximately SW cor. NW Section 20-22-3w, which made 1,540 bbls. of oil in 22 hours from the Hunton lime at a total depth of 3,496 feet.

On the west side the production was extended one location by Mid-Kansas Oil & Gas Co.'s No. 1, SE cor. NE Section 19-22-3w, which made 723 bbls. in two hours from the Hunton lime at 3,475-77 feet. These wells indicate that the surrounding area will be subjected to an intensive development at some later date when the crude oil is needed.

These wells are located on the Abilene arch, the same as the Voshell Pool, several miles northeast, in McPherson County.

Big Gas Well in Reno County

Northeastern Reno County development is considered important. The State's largest gas well was completed in April, Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Goering, C NE SW Section 25-23-4w. It gauged 86,500,000 feet of dry gas a day, with a rock pressure of 1,170 pounds, from chat at 3,237-3,392 feet. It extended the producing area in that part of the county a half mile to the south and a half mile to the west of the discovery well. The new well was considered high on the structure and indicates a large gas reserve for the area.

The same operators extended production three-quarters of a mile to the west with No. 1 Goering, C NE SW Section 26-23-4w, which blew in for an estimated flow of 40,000,000 feet of gas a day from the chat at 3,242-91 feet. The discovery well completed last year the Shell Petroleum Corp.'s No. 1 Blake, in Section 23-23-4w, made 16,000,000 feet of gas a day and 200 bbls. of oil from the chat at 3,267-78 feet.

In January an important extension well was completed in Ellsworth County in the Silicious lime, adding another well to the already numerous areas along the Barton-Ellsworth arch. Allison-Fitzwilliam Petroleum Corp.'s No. 1 Stratman, C SW SE Section 23-16-10w, estimated at 1,000 bbls. a day. The oil was found at 3,388-91 feet. The well was shut in at that time and remained shut in all during the first six months of the year, for a pipe line connection. It was known as the north Stratman Pool.

The Stratman Pool, in Ellswqrth County, was discovered in April, 1931. It was extended until it had nine producing wells this year in Section 1 and 12-17-10w. The production from these wells was shipped by a pipe line to a loading rack until May, when it was again shut in without any outlet. This developed into the second largest pool along the Barton-Ellsworth arch. Its limits have not been defined, and development has been delayed until operators find an outlet for the crude oil. The potential of the wells completed range from 1,000 bbls. to 2,500 bbls. daily.

Barton County started the year with promising prospects, but in February the first disappointment occurred in the southeastern part when water was found in a well 990 feet from the discovery well in the Isern Pool. The well was Midwest Refining Co.'s No. 1 Berscheidt, C NW SE Section 12-20-11w, which found water in the Silicious lime at 3,293-3,345 feet. It was located in the center of a 40-acre tract at the suggestion of the Kansas Public Service Commission, which at that time was trying to inaugurate a policy of drilling one well to a 40-acre tract in the central part of the State.

The direct south offset to the discovery well was Derby Oil Co.'s No. 1 Berscheidt, NW cor. NE SE Section 12-20-11w, made a 200-bbl. pumper. It was drilled into the Silicious lime at a total depth of 3,342 feet and plugged back to 3,329 feet.

The Isern Pool development was delayed on account of the fact that a dry hole was found offsetting the discovery well, and only two wells were completed in the area during the first six months.

In Rice County

Oil was discovered in Rice County about two and one-half years ago and, with the exception of the Schurr Pool and the Sharpe Pool, all the other pools are thus far one-well pools. The Sharpe Pool was the only area in that county that had any development during the first part of the year.

In March, Gypsy Oil Co.'s No. 1 Steckel, C NE NW Section 33-19-10w, Rice County, found oil in the Silicious lime at 3,312-24 feet and was estimated at 700 bbls. a day. The well was shut in and was without a pipe line connection. It was drilled on a block of 1,000 acres, the company owning all the offsets. This well is located about 2½ miles northeast of the Isern Pool in Barton County, and it adds to the list of one-well pools along the Barton-Ellsworth arch.

The second well in the Sharpe area to produce was completed in May. It was the Empire Oil & Refining Co. and others' No. 1 Masemore, SW cor. NW Section 18-20-9w. The well was given a potential rating of 1,100 bbls. a day. It produces from the Silicious lime at 3,215-22 feet.

The third well completed extended production a location southeast. It was Empire Oil & Refining Co. and others' No. 1 C. Heiken, NW cor. SW Section 18-20-9w, and was a diagonal southeast from the discovery well. The Silicious lime was found at 3,232-38 feet, where it was estimated to be better than a 1,000-bbl. well. The operators were unable to give the well a production test as it was without a pipe line outlet at that time.

In Stafford County

During the first six months of the year only one well was added to the Richardson area in Stafford County. The Midwest Refining Co.'s No. 29 Allen, C SW SW Section 31-22-11w, was completed for 1,065 bbls. of oil a day from the Silicious lime at 3,534-60 feet. This pool has three producing wells with a potential of 4,100

KANSAS (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
Benton—							
Daily average	48	44	44	45	49	47	
Month	1,488	1,276	1,464	1,350	1,519	1,410	8,407
Blankenship—							
Daily average	377	380	345	362	361	363	
Month	11,687	11,020	10,695	10,860	11,191	10,890	66,343
GREENWOOD AND WOODSON COUNTIES:							
Sallyards—							
Daily average	745	779	778	753	864	797	
Month	23,095	22,591	24,118	22,590	26,784	23,910	143,088
Teeter—							
Daily average	2,824	2,761	2,657	2,593	2,758	2,742	
Month	87,544	80,069	82,367	77,790	85,498	82,260	495,528
Virgil—							
Daily average	3,495	3,518	3,537	3,510	3,686	3,674	
Month	108,345	102,022	109,647	105,300	114,266	110,220	649,800
Thrall-Burkett—							
Daily average	760	753	744	738	867	870	
Month	23,560	21,837	23,064	22,140	26,877	26,100	143,578
Seeley—							
Daily average	4,535	4,219	4,258	4,193	4,280	4,262	
Month	140,585	122,351	131,998	125,790	132,680	127,860	781,264
Polhamus—							
Daily average	535	509	482	477	582	570	
Month	16,585	14,761	14,942	14,310	18,042	17,100	95,740
Miscellaneous—							
Daily average	642	623	621	604	640	641	
Month	19,902	18,067	19,251	18,120	19,840	19,230	114,410
COWLEY COUNTY:							
Rainbow Bend—							
Daily average	1,263	1,264	1,265	1,257	1,363	1,351	
Month	39,153	36,656	39,215	37,710	42,253	40,530	235,517
Slick—							
Daily average	328	341	343	338	329	324	
Month	10,168	9,889	10,633	10,140	10,199	9,720	60,749
Graham—							
Daily average	219	215	205	210	211	210	
Month	6,789	6,235	6,355	6,300	6,541	6,300	38,520
Rock—							
Daily average	120	107	108	103	120	121	
Month	3,720	3,103	3,348	3,090	3,720	3,630	20,611
Clark—							
Daily average	127	112	120	114	119	117	
Month	3,937	3,248	3,720	3,420	3,689	3,510	21,574
Eastman—							
Daily average	323	334	262	263	331	318	
Month	10,013	9,686	8,122	7,890	10,261	9,540	55,512
Winfield-New Salem—							
Daily average	4,052	4,030	4,274	5,986	5,133	3,916	
Month	125,612	116,870	132,494	179,580	159,123	117,480	831,159
Miscellaneous—							
Daily average	728	802	774	750	878	860	
Month	22,568	23,258	23,994	22,500	27,218	25,800	145,338
McPHERSON COUNTY:							
Ritz-Canton—							
Daily average	12,743	12,281	12,645	11,819	13,120	11,463	
Month	395,033	356,149	391,995	354,570	406,720	343,890	2,248,357
Voshell—							
Daily average	9,296	7,871	7,284	8,112	7,609	6,113	
Month	288,176	228,259	225,804	243,360	235,879	183,390	1,404,868
Johnson—							
Daily average	.....	.....	.....	.....	.....	492	
Month	.....	.....	.....	.....	.....	14,760	14,760
Miscellaneous—							
Daily average	89	89	107	99	378	510	
Month	2,759	2,581	3,317	2,970	11,718	15,300	38,645
OTHER COUNTIES:							
Trego—							
Daily average	2	2	.....	2	.....	.....	
Month	62	58	.....	60	.....	.....	180
Rooks—							
Daily average	146	138	168	146	135	137	
Month	4,526	4,002	5,208	4,380	4,185	4,110	26,411
Sumner—							
Daily average	4,721	4,820	4,733	4,415	5,049	4,992	
Month	146,351	139,780	146,723	132,450	156,519	149,760	871,583
Rice—							
Daily average	3,005	2,919	3,004	3,115	1,838	1,706	
Month	93,155	84,651	93,124	93,450	56,978	51,180	472,538

(Continued on Next Page)

bbls. a day and is shut in. The pool has no pipe line connection.

Rush County Promising

Rush County gives promise of developing into a producing area and is the most westerly county along the Barton-Ellsworth arch to produce oil. In the eastern part of the county, several large gas wells have been completed and are shut in awaiting an outlet. The only oil production is Dewey & Mitchell's No. 1 Greenawalt, in Section 17-19-16w, which has a potential of 200 bbls. a day from the Silicious lime at 3,815-40 feet. It was completed last September and is now shut in after being produced a few months during this year. The crude oil was shipped out in tank cars from a loading rack near Shaffer.

In May the Skelly Oil Co.'s No. 1 Liesman, in Section 20-27-10w, Kingman County, extended production a half mile to the west from the same company's discovery well. Oil was found in the Kansas City lime at 3,416-65 feet, and was estimated at 250 bbls. a day. The company drilled the well deeper and it was shut down at 3,925 feet, where casing was cemented on top of the Viola lime, at the close of June.

The well will be a deep test, the first in the area. It is located on a large block of acreage owned by the company.

Several important extensions to the north and south were made in the Voshell Pool during the first half of the year. In March the Simpson sand production was extended a half mile to the north by Slick, Pryor & Lockhart's No. 1 Stucky, SE cor. SW SW Section 27-20-3w, which made 800 bbls. of oil from the Simpson sand at 3,425-42 feet. It was an old chat gas well completed about three years ago and drilled deeper.

Production was extended two locations south in June by a chat well. Mid-Kansas Oil & Gas Co.'s No. 1 Sperling, NW cor. NE Section 28-21-3w, made 395 bbls. of oil from the chat at 3,088-3,142 feet. This well resulted in the drilling of several other tests in the vicinity.

In the Wichita Area

The Wright Pool, near Valley Center, Sedgwick County, was extended more than a half mile to the southwest in May. Continental Oil Co. and Gypsy Oil Co.'s No. 1 Bishop, NW cor. NE Section 13-26-1w, made 2 bbls. of oil an hour from the chat at 3,058-3,160 feet. This well was drilled on a short term lease and was the second well developed in the extension to the Wright Pool the first part of the year. The same companies' No. 1 Lambe, in Section 12-26-1w, was completed for 40 bbls. of oil from the chat.

The Winfield Development

A good-sized producer on the east side of the Winfield townsite in Cowley County in May led to an active townlot development. The first good-sized well on the east side of the townsite was Sinclair Prairie Oil Co.'s No. 2 Dibbens, in Section 22-32-4, Lot 5, Block 12. It swabbed 885 bbls. of oil in 24 hours from the Silicious lime at 3,251-62 feet.

Activity continued on the townsite until there were more than a score of tests drilling and a large number of others staked or in the process of development. The activity spread to the south of the Southwestern College section of the townsite. Winfield city officials continued to grant permits for new wells. Production on the townsite was found in two horizons, one around 2,300 feet and the other the Silicious lime at 3,250 feet.

The older areas in the State were dormant with the exception of some scattered development in Greenwood County. In February a new well in the Seeley Pool extended production a half mile from the nearest other production. The well was J. R. Hays and J. Harwood's No. 1 Carson, NE cor. NW Section 33-23-11. It found the Bartlesville sand at 1,973-93 feet, from which the oil rose 400 feet in the hole in a short time. The well was completed for 250 bbls. of oil a day.

In the south end of the Seeley Pool, in Greenwood County, in April, Ward McGinnis' No. 1 Edwards, NE cor. NW NE Section 33-23-11, was completed for a 200-bbl. well. This led to other development in the area and the same operator's No. 2 Edwards, SE cor. NW NE Section 33-23-11, swabbed 430 bbls. of oil after a 140-quart shot from the Bartlesville sand at 1,954-88 feet. It was one of the largest wells completed in the county in the first half of the year.

Butler County was quiet during the first six months. An interesting test was drilled offsetting a producing well, but was dry. Ramsey Petroleum Co.'s No. 1 Ramsey, SE cor. NE Section 1-25-5, found water in the chat at 2,503-63 feet and was abandoned. It was the west offset to a producer drilled several years ago. Several other tests were drilled surrounding the well from distances ranging from 360 feet to a mile and all were dry holes.

Progress of New Field

A survey of the most recent fields in the State, a part of which were opened last year and even before that, gives their status as of June 30 as follows:

The Ritz-Canton-Decker Field in McPherson County, discovered in June, 1929, continued to be the most active and largest field in the State in the first half of the year. In June, 1932, there were 141 wells, with a one-day potential estimated at 115,542 bbls. The size of the field was estimated at 14,000 acres. The McPherson Pool in McPherson County, discovered in February, 1932, had six wells on June 30, with a potential of 10,000 bbls. a day. Its area is estimated as 2,000 acres. The Burrton area, in northeastern Reno County, discovered in September, 1931, had 8 wells and 1,500 bbls. a day potential on June 30 and a large gas reserve. It has 7,000 proven acres. The Hollow Pool, in northwestern Harvey County, discovered in December, 1931, had three wells with a potential of 5,000 bbls. and an estimated 2,000 acres by the close of June this year.

In Ellsworth County the Stoltenberg Pool, discovered in June, 1931, had five wells with a potential of 7,000 bbls. on June 30, and an estimated 4,000 acres of productive leases. The Stratman Pool, now with nine producing wells and a potential of 14,200 bbls. a day and 2,500 acres, was discovered in April, 1931. The Heiken area on June 30 had two wells with a potential of 2,400 bbls. a day and 1,000 acres of prospective territory.

In Rice County the Schurr Pool showed 12 producing wells with a potential of 12,000 bbls. a day and 640 prospective acres. It was discovered in August, 1929. The Ploog area, with only one well, with a potential of 2,000 bbls. a day, was dissovered in August, 1930. The Beyers area, with one well and a potential of 250 bbls. a day, was discovered in February, 1931. The Sharpe area, with three wells and a potential of 2,400 bbls. a day, was discovered in April, 1931.

In Barton County the Isern Pool, with two wells and a potential of 1,070 bbls. a day, is estimated to have 640 acres, and was discovered in December, 1931. The Sinclair-Prairie Davidson Pool, with one well with a potential of 200 bbls. a day and 640 prospective acres, was discovered in March, 1930.

Stafford County, with three wells and a potential of 4,100 bbls. a day and 2,000 prospective acres, was discovered in October, 1930. Rush County, with the Greenawalt area, is a one-well pool, with a potential of 50 bbls. a day and an estimated 1,000 acres of prospective territory, was discovered in August, 1931.

KANSAS
Summary of Wells Completed First Six Months 1932

County—	Comp.	Prod.	Dry	Gas
Butler	4	80	1	0
Greenwood	42	2,386	26	0
Rush	2	0	0	2
Jefferson	1	0	1	0
Morris	3	85	2	0
Woodson	1	100	0	0
Chase	3	100	1	1
McPherson	55	41,044	12	2
Sedgwick	32	11,749	9	0
Kingman	2	365	0	0
Reno	8	1,290	2	1
Chautauqua	1	0	0	1
Cowley	33	7,038	4	1
Rice	7	2,679	3	0
Sumner	2	0	2	0
Harvey	4	380	1	0
Stafford	5	1,405	2	0
Ellsworth	11	13,453	1	0
Russell	3	185	2	0
Barton	3	60	2	0
Marshall	1	0	1	0
Douglass	1	0	1	0
Barber	1	6	1	0
Coffey	2	60	1	0
Ellis	1	50	0	0
Marion	1	0	1	0
Osage	1	0	1	0
Ttl. 6 mos. 1932..	230	82,509	77	9
Ttl. 6 mos. 1931..	256	75,488	79	58
Difference	26	7,021	2	49

Summary by Months

January	42	13,980	11	4
February	37	17,004	15	0
March	30	7,522	6	2
April	43	14,556	12	1
May	35	16,499	18	0
June	44	12,948	15	2
First half 1932....	230	82,509	77	9
First half 1931....	256	75,488	79	58
First half 1930....	514	100,380	217	47
First half 1929....	489	78,523	206	38
First half 1928....	624	68,531	225	59
First half 1927....	770	62,726	331	40
First half 1926....	1,209	88,401	390	54
First half 1925....	864	107,407	286	54

KANSAS (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
Russell—							
Daily average	2,556	2,548	2,803	2,874	2,809	2,811	
Month	79,236	73,892	86,893	86,220	87,079	84,330	497,650
Reno—							
Daily average	204	207	229	277	484	428	
Month	6,324	6,003	7,079	8,310	15,004	12,840	55,580
Harvey—							
Daily average	160	143	150	155	379	526	
Month	4,960	4,147	4,650	4,650	11,749	15,780	45,936
Chautauqua—							
Daily average	1,753	1,746	1,750	1,739	838	1,510	
Month	54,343	50,634	54,250	52,170	25,978	45,300	282,675
Elk—							
Daily average	2,015	2,004	1,975	1,963	1,032	1,163	
Month	62,465	58,116	61,225	58,890	31,992	34,890	307,578
Wilson—							
Daily average	150	146	146	142	129	130	
Month	4,650	4,234	4,526	4,260	3,999	3,900	25,569
Montgomery—							
Daily average	1,179	1,174	1,182	1,167	1,274	1,263	
Month	36,549	34,046	36,642	35,010	39,494	37,890	219,631
Edwards—							
Daily average	30	34	39	37	41	39	
Month	930	986	1,209	1,110	1,271	1,170	6,676
Ellis—							
Daily average	859	819	878	896	837	813	
Month	26,629	23,751	27,218	26,880	25,947	24,390	154,815
Barton—							
Daily average	185	188	206	185	166	67	
Month	5,735	5,452	6,386	5,550	5,146	2,004	30,273
Kingman—							
Daily average	252	244	235	236	286	199	
Month	7,812	7,076	7,285	7,080	8,866	5,970	44,089
Stafford—							
Daily average	.....	.....	57	171	385	.....	
Month	.....	.....	1,767	5,130	11,935	.....	18,832
Allen—							
Daily average	466	469	464	460	410	421	
Month	14,446	13,601	14,384	13,800	12,710	12,630	81,571
Neosho—							
Daily average	480	477	480	469	468	461	
Month	14,880	13,833	14,880	14,070	14,508	13,830	86,001
Lyon—							
Daily average	322	309	336	331	324	322	
Month	9,982	8,961	10,416	9,930	10,044	9,660	58,993
Miami—							
Daily average	1,236	1,143	1,247	1,195	1,179	1,180	
Month	38,316	33,147	38,657	35,850	36,549	35,400	217,919
Franklin—							
Daily average	268	264	267	263	286	279	
Month	8,308	7,656	8,277	7,899	8,866	8,370	49,367
Douglass—							
Daily average	15	15	15	14	.....	.....	
Month	465	435	465	420	.....	.....	1,785
Bourbon—							
Daily average	26	25	27	26	29	27	
Month	806	725	837	780	899	810	4,857
Linn—							
Daily average	152	150	150	147	456	169	
Month	4,712	4,350	4,650	4,410	14,136	5,070	37,328
Anderson—							
Daily average	1,070	1,073	1,078	1,069	284	1,109	
Month	33,170	31,117	33,418	32,070	8,804	33,270	171,849
Ellsworth—							
Daily average	1,443	1,007	1,154	1,055	1,566	1,685	
Month	44,733	29,203	35,774	31,650	48,546	50,545	240,451
Woodson—							
Daily average	114	116	110	113	38	99	
Month	3,534	3,364	3,410	3,390	1,178	2,970	17,846
Daily average	102,277	97,891	98,159	99,136	98,030	94,573	98,367
Total first six months 1932	3,170,587	2,838,839	3,042,929	2,974,080	3,038,930	2,837,179	17,902,544
Total first six months 1931	3,432,475	3,341,016	3,498,598	3,281,880	3,341,366	3,175,440	20,070,775
Total first six months 1930	3,273,197	2,965,704	3,504,395	3,734,253	3,987,385	3,765,060	21,220,994
Total first six months 1929	2,861,641	2,557,968	2,951,076	3,112,740	3,665,099	3,636,150	18,784,674
Total first six months 1928	3,319,325	3,079,887	3,379,031	3,412,360	3,367,809	3,202,050	19,760,462
Total first six months 1927	3,769,879	3,352,076	3,675,143	3,516,930	3,704,314	3,437,580	21,455,922
Total first six months 1926	3,250,536	2,877,812	3,334,887	3,330,120	3,516,640	3,366,450	19,676,445

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"OILWELL"

Outside of Hobbs Field New Production Was Very Light in Rocky Mountain Area

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

Drilling operations in the Rocky Mountain area, comprising New Mexico, Colorado, Wyoming, Montana and Utah, in the first half of 1932 resulted in only 70 completions, the smallest number in the same period for a number of years. This compares poorly with 111 in the same period in 1931. New production amounted to 69,804 bbls. daily, of which almost 90 per cent was in the Hobbs Pool in New Mexico, compared with 80,478 bbls. of new production in the first half of 1931, a decrease of 10,674 bbls. Dry holes in the five states were 30, compared with 36 in the same period last year, and gas wells were 5 as against 24 in the first half of 1931. The small number of producers completed was due principally to the slowing down of development in the proven fields, in most of which drilling operations were at a standstill.

In New Mexico, the Hobbs Pool was extended half a mile to the north and one-third of a mile to the northwest, with a minor extension on the southeast. No new pools were discovered. A semiwildcat in Eddy County made an important extension of the productive area in the Jackson Pool.

In Wyoming, the Frannie structure in Park County was extended one-fourth of a mile to the west in a test which proved the dome to be at least half full of oil. Drilling on a considerable scale took place in the new west extension of the Osage Field in Weston County. No new pools were discovered and important wildcats on the Neiber Dome in Washakie County, the Geary Dome in Natrona County, and the Bunker Hill structure in Carbon County, were failures.

Montana had two important extensions of the Dry Creek Field in Carbon County to the northwest and to the east, a mile in each direction. A discovery in the Whitlash district in Liberty County pointed to the opening of a small pool. Two important wildcats on the Golden Dome in Carbon County and in the Utopia district in Liberty County were abandoned.

The principal development in Colorado was in the Hiawatha Field in Moffat County where the gas wells have begun to show oil. These wells produce from the Wasatch formation of Tertiary age and the appearance of oil in this horizon opens immense possibilities in the Tertiary, to which little attention heretofore has been given, in all of the Rocky Mountain States. A new gas field was discovered on the Craig Dome in Moffat County, and the Piceance Creek structure in Rio Blanco County was proven for gas. While several wells were abandoned in northeastern Colorado, wildcatting on a scale ahead of last year has been resumed in that district.

Utah, Washington and Idaho had no additional discoveries to their credit. One important wildcat in Idaho was a failure, but Washington shows encouraging prospects in the tests being drilled.

WYOMING

Completions in Wyoming in the first half of 1932 were less than half the number in the same period last year and new production was less than one-third. Drilling operations were at a standstill in the proven fields with the exception of the Frannie Pool, in Park County, where one well was drilled and marked an important extension of the producing area, and in the Osage Field in Weston County where the west extension continued to receive the most attention. There were no new oil or gas pools discovered and several important wildcats were failures.

The Midwest Refining Co.'s No. 4 Rosenberg, NE NW NE Section 26-58-98, on the Frannie Dome, which was completed in March, extended the pool one-fourth of a mile to the west. This was exceeded in importance, however, by the fact that the test is 530 feet down structure and proved the dome to be at least half full of oil and that better wells may be expected on the flanks than at the top, probably due to low hydrostatic pressure. The well topped the red beds at 2,666 feet, the Embar at 3,225 feet, the top of the pay at 3,275 feet and was completed at 3,295 feet. It made 610 bbls. on the pump the first 24 hours, which compares with wells of from 150 to 300 bbls. on the top. The oil is of asphalt base and is desired for the cracking unit installed last year by the Midwest Refining Co. at its Greybull plant for the purpose of handling a larger quantity of the heavier grades.

The Osage Field in Weston County accounted for 936 bbls. of the 1,546 bbls. of new production during the period. This pool is developing some good wells in the west extension and a ready market for the oil has been found in the several local refineries which supply large quantities of fuel oil to the farmers in northeastern Wyoming and western South Dakota. Prices for crude held steady during the first half of the year and were subject to less fluctuation than in other fields.

Important Wildcats Completed

Several important wildcats were completed during the first six months of the year. The Midwest Refining Co.'s No. 11 Geary, SE NW NW Section 32-34-77, on the Geary Dome, to the northwest of the Big Muddy Field, was drilled to 6,210 feet and found hot water in the Lakota. The Muddy at 6,092-6,105 feet was dry and the Dakota at 6,155-75 feet made 5,500 bbls. of water per day. The Lakota at 6,188-6,210 feet produced 5,000 bbls. of hot water at a temperature of 142° F.

Prior to the completion of this well the Mutual Oil Syndicate, headed by Sidney H. Keoughan, acquired the holdings of the Midwest and associated companies on the North Geary and Midway Domes and started a test in No. 2, C SW SE Section 14-35-79, one-fourth of a mile to the northwest of the discovery well in the second Frontier which produced several hundred barrels initial after plugging back from deeper horizons. No. 2 topped the second Frontier at 5,233 feet and was drilled to 5,257 feet. After setting the 7-inch on top of the sand and drilling out the plug, it failed to show commercial production and at this writing it is being cored deeper into the sand. It proved to be about 80 feet lower than the discovery well, and the sand is much thicker.

The Prairie Oil & Gas Co.'s No. 1, SE SE SW Section 29-27-89, a rotary test of the Bunker Hill Dome, north of the Wertz Dome, in Carbon County, tested all horizons down to the top of the red beds at 6,791 feet. The Sundance was dry. The other horizons yielded nothing worth while and the hole was abandoned. The Frontier sands were at 4,891-5,130 feet, 5,221-63 feet and 5,400-65 feet.

The Ohio Oil Co.'s No. 1 Strothers, SW SE NW Section 19-45-92, Neiber Dome, Washakie County, one of the

WYOMING

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
BIG BUDDY:							
Daily average	1,620	1,660	1,511	1,616	1,712	1,666	
Month	50,220	48,140	46,841	48,480	53,072	49,980	296,733
DALLAS-DERBY:							
Daily average	465	376	580	593	583	586	
Month	14,415	10,904	17,980	17,790	18,073	17,580	96,742
DUTTON CREEK:							
Daily average	32	34	71	49	69	71	
Month	992	986	2,201	1,470	2,139	2,130	9,918
ELK BASIN:							
Daily average	622	632	602	674	658	586	
Month	19,282	18,328	18,662	20,220	20,398	17,580	114,470
FERRIS:							
Daily average	36	28	25	23	21	21	
Month	1,116	812	775	690	651	630	4,674
FRANNIE:							
Daily average	317	162	1,255	1,084	1,454	27	
Month	9,827	4,698	38,905	32,520	45,074	810	131,834
GRASS CREEK:							
Daily average	337	1,995	1,984	1,202	2,022	1,424	
Month	10,447	57,855	61,504	36,060	62,682	42,720	271,268
HAMILTON:							
Daily average	735	730	738	726	736	922	
Month	22,785	21,170	22,878	21,780	22,816	27,660	139,089
HUDSON:							
Daily average	449	413	425	476	453	349	
Month	13,919	11,977	13,175	14,280	14,043	10,470	77,864
LA BARGE:							
Daily average	1,048	1,119	1,123	1,081	1,110	844	
Month	32,488	32,451	34,813	32,430	34,410	25,320	191,912
LANCE CREEK:							
Daily average	116	101	96	110	106	164	
Month	3,596	2,929	2,976	3,300	3,286	4,920	21,007
LOST SOLDIER:							
Daily average	3,229	2,990	2,625	3,112	2,034	2,575	
Month	100,099	86,710	81,375	93,360	63,054	77,250	501,848
POISON SPIDER:							
Daily average	31	26	86	37	80	89	
Month	961	754	2,666	1,110	2,480	2,670	10,641
OREGON BASIN:							
Daily average	....	.....	910	.....	206	.....	
Month	....	.....	28,210	.....	6,386	.....	34,596
OSAGE:							
Daily average	554	1,136	954	931	936	850	
Month	17,174	32,944	29,574	27,930	29,016	28,500	165,138
ROCK CREEK:							
Daily average	1,575	1,608	1,625	1,665	1,718	1,195	
Month	48,825	46,632	50,375	49,950	53,258	35,850	284,890
SALT CREEK:							
Daily average	20,250	23,287	22,584	22,015	22,226	21,875	
Month	627,750	675,323	700,104	660,450	689,006	656,250	4,008,883
BYRON-GARLAND:							
Daily average	1,007	1,263	1,077	1,306	1,108	1,429	
Month	31,217	36,627	33,387	39,180	34,348	42,870	217,629
TEAPOT:							
Daily average	12	24	12	25	18	20	
Month	372	696	372	750	558	600	3,348
MIDWAY:							
Daily average	113	61	65	.....	32	94	
Month	3,503	1,769	2,015	.....	992	2,820	11,099
BADGER BASIN:							
Daily average	47	48	39	52	51	49	
Month	1,457	1,392	1,209	1,560	1,581	1,470	8,669
Daily average	32,595	37,693	38,387	36,777	37,333	34,936	36,276
Total first six months 1932	1,010,445	1,093,697	1,189,997	1,105,318	1,157,323	1,048,080	6,602,252
Total first six months 1931	1,358,234	1,254,568	1,264,366	1,329,390	1,329,652	1,278,720	7,814,930
Total first six months 1930	1,430,898	1,409,184	1,587,665	1,527,930	1,565,283	1,406,850	8,927,810
Total first six months 1929	1,512,087	1,442,336	1,599,104	1,490,430	1,581,806	1,520,160	9,145,923
Total first six months 1928	1,756,505	1,598,602	1,714,889	1,748,520	1,908,918	1,834,410	10,561,844
Total first six months 1927	1,870,727	1,678,180	1,840,439	1,838,070	1,896,301	1,852,920	10,976,637

deepest tests drilled in the Rocky Mountain states, found the Sundance dry at a total depth of 8,596 feet. It then plugegd back and tested the second Frontier at 7,465-75 feet, where 10 feet of saturation was shown in the cores, and failing to recover the production, the hole was abandoned. This is one of the largest structures in Wyoming and another test at some future date is not improbable.

Refineries Electrified

The electrification of the refineries at Casper by the Midwest Refining Co. and Standard Oil Co. of Indiana was provided for in a contract let in March to the Stearns-Roger Manufacturing Co. of Denver. A 45-mile high tension power line from the Midwest's big power plant in Salt Creek to the refineries was begun. It will provide electric power for all prime movers to replace steam power. Work also was begun on the installation of a Cross cracking unit with a daily charging capacity of 6,500 bbls. per day. The plant was designed at the Whiting plant of the company and, while it replaces obsolete equipment, was developed with the purpose of handling a larger quantity of black oils.

The Secretary of the Interior signed on February 13 a unit operating agreement covering the gas sands in the Big Sand Draw Field in Fremont County. The field is operated by the Producers & Refiners Corp. and supplies gas to Casper, Glenrock, and other towns in Wyoming and cities and towns in western Nebraska.

Operators in the Big Muddy Field reached an agreement with the State of Wyoming under which a plan for spacing wells to be drilled to the Lakota was adopted. The plan provides for a lesser number of offsets and for the conservation of gas and oil. The Lakota was proven last year, and while no wells were drilled to that horizon in the first half of 1932, the Ohio and Continental Oil companies were each drilling one well at the close of the period. There was no drilling in Salt Creek during the period.

WYOMING

Summary of Wells Completed First 6 Months

County—	Comp.	Prod.	Dry	Gas
Johnson	1	0	1	0
Natrona	3	0	3	0
Park	1	610	0	0
Washakie	1	0	1	0
Weston	8	936	0	0
Total	14	1,546	5	0
Same period 1931	29	4,979	5	4
Difference	15	3,433	0	4

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	2	0	2	0
February	4	5	3	0
March	2	910	0	0
April	3	128	0	0
May	2	203	0	0
June	1	300	0	0
Total	14	1,546	5	0

MONTANA

Montana, like the other Rocky Mountain states, showed a big decrease in the number of wells completed during the first half of 1932.

The most important operating development of the six-month period was the extension of the Dry Creek Pool. An oil discovery in the Whitlash district in Liberty County, near the Canadian boundary, was made late in 1931 and carried in the annual review for that year. Its importance was not definitely determined, however, until later. Two structural tests, one in Liberty County and the other in Carbon County, were failures and were abandoned.

The Carbon Oil & Gas Co. completed its No. 1 Armstrong, SW cor. NW Section 7-7s-22, a little more than a mile to the east of the nearest producer, on the Dry Creek Dome in Carbon County, early in January. This test lies to the south of a major fault which crosses the structure in a general east-west direction. It topped the Dakota at 5,601 feet and was drilled to 5,710 feet. It gauged 1,800 bbls. of oil and 12,000,000 feet of gas per day, the oil being the same grade of high gravity crude found in the wells to the west. When shut in it built up a pressure of 1,030 pounds in 30 minutes, or more than double the pressure of the wells on top. A contract was made with the Yale Oil Corp. for a maximum of 1,000 bbls. daily for its refinery at Billings. About a month ago the well began showing water, but whether this was upper or bottom water has not yet been definitely determined. Work is being done on the well and the past week production was being recovered.

On this same dome Ohio Oil Co. opened a deeper pay horizon in the Pryor conglomerate in the Lakota formation in its No. 6 Montana Industrial C NW SE Section 11-7s-21. The pay was found at a total depth of 5,488 feet and the well gauged 722 bbls. in 18 hours. Subsequently it increased to 1,300 bbls. per day before being pinched in. The oil tests 52 degrees gravity. The same company drilled a test to the top of the red beds at 6,219 feet in its No. 1 Chapman, C SW SW Section 2-7s-21, a mile to the northwest of the discovery well and north of the major fault. The Sundance was barren and the well was plugged back to the Dakota. A pay sand was recovered at 5,601-35 feet. The first Frontier at 4,365-4,420 feet and the second Frontier at 4,735-80 feet showed gas in the cores taken, but these were cased off to continue to the oil. The Dry Creek Dome is undergoing development by the two companies named. The Ohio Oil Co. is shipping part of its production to the Utah Oil Refining Co. at Salt Lake City.

A test of the Golden Dome, 3 miles east of Dry Creek, by the Ohio Oil Co. in its No. 1 Kuchinski, NW SE NE Section 15-7s-22, drilled all horizons down to and including the Morrison at a total depth of 6,660 feet. The Lakota at 6,115 feet had sulphur water. The Dakota had a little show of gas and the first Frontier had water and the second Frontier a show of oil and gas.

The California Co. drilled a test in the Utopia district in Liberty County, in its No. 1 Ross, NE SE NE Section 3-33n-6e, and abandoned it at 3,337 feet in the Madison. The Sunburst sand at 3,015-60 feet was dry. A water sand was cut at 3,226-70 feet and a dry sand was encountered at 3,208-18 feet. This test was located 1¼ miles north of the Eleanor Association's No. 1 Eleanor, which in 1931 had some good shows of oil, but which could not be tested on account of a bad hole.

The discovery in the Whitlash district, in northwestern Liberty County, northeast of the Kevin-Sunburst Field and close to the Canadian boundary, was made late in 1931, but its importance was not definitely established until early in this year. This test was drilled by the Western Natural Gas Co. in its No. 1 Hicks, C NW NE Section 26-37n-4e, and is to the southeast of several gas wells from which gas is piped to Great Falls. It was drilled primarily for gas, but at 1,631-65 feet it cut a sand in the base of the Colorado shale which showed a small saturation. Another sand was cut at 1,778-93 feet and the hole was drilled to 1,815 feet. It pumped 78 bbls. initial in 5½ hours and then settled to 1 bbl. per hour. The oil is high grade, testing about 45 degrees gravity. It pointed to the opening of a pool, not expected to be very large, but having unknown possibilities in the lower sands. No other tests were drilled around it, but at the end of June six wells were being started which would feel out the productive limits in all directions from the discovery.

MONTANA

Summary of Wells Completed First 6 Months

County—	Comp.	Prod.	Dry	Gas
Carbon	4	4,936	1	0
Liberty	2	100	1	0
Musselshell	2	0	2	0
Pondera	1	50	0	0
Toole	5	220	1	1
Total	14	5,356	5	1
Same period 1931	27	94	11	11
Difference	13	5,262	6	10

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	6	3,936	1	1
February	2	60	1	0
March	0	0	0	0
April	1	0	1	0
May	3	1,350	1	0
June	2	10	1	0
Total	14	5,356	5	1

NEW MEXICO

There were no major pools opened in New Mexico in the half year and the most important developments were slight extensions of the productive area of the Hobbs Pool in Lea County, where almost all of the new production was found. No wells were drilled in the Lea, Eunice or Jal Pools during the six months. The nine wells completed in the Hobbs Pool mostly were in the southeastern end of the field and were made necessary by the placing on production last fall of the Midwest Refining Co.'s No. 29 Turner, C SW SW Section 34-18-38, an outside well in the Hobbs townsite. The drilling took place between this well and the inside producers, with two exceptions. The Midwest drilled one location to the north and one location to the south of No. 29 Turner and brought in producers, although their performance indicated that they were not far from the edge.

The principal extensions of the pool were on the north and northwest. The Amerada Petroleum Corp. drilled its No. 1 Hardin, SW cor. Section 18-18-38, half a mile ahead of production and brought in a producer in June at a total depth of 4,158 feet. It was given an official potential of 10,174 bbls. of oil and 6,000,000 feet of gas per day. The Texas Pacific Coal & Oil Co.'s No. 3-G State, C SE Section 24-18-37, marked an extension one-third of a mile to the west on the northwestern side of the field. It was drilled to 4,227 feet and the tubing was run to 4,197 feet, somewhat deeper than the wells to the east. It was officially rated at 3,758 bbls. of oil and 8,626,000 feet of gas per day.

Hobbs continued under proration during the first six months of 1932 with no important changes. The agreement between the operators and the state expired early in January and was renewed for a period of a year. The only change was that the state geologist signed for the state instead of the commissioner of the land office upon the insistence of Governor Seligman. On January 1, the proration agreement covered 149 wells on 131 units of 40 acres each. The potential was established at 1,152,877 bbls. daily and the allowable outlet was placed at 35,182 bbls. At the end of June there were 157 wells on 135 units. The potential was 1,166,575 bbls. and the allowable outlet was 29,430 bbls. daily. The outlet figures about represent the maximum and minimum for the period. At the end of June eight wells were given special allowances on account of water intrusion. These were all on the southwestern edge where water has been showing in a few of the outside wells for some time.

During the first half of the year some progress was reported in plans to unitize the field. A committee of petroleum engineers representing the Humble Oil & Refining Co., The Texas Company, the Shell Petroleum Co., the California Co. and the Gypsy Oil Co. made a study of conditions and recommended to the operators and the state that the pool be operatel as a unit. The report declared that if the unitization plan was adopted, the full recovery would be increased at least 50 per cent during the next 10 years and that it could be operated more economically. The recommendation is now before the operators for consideration.

Eddy County

Four producers, four dry holes (three of which were sulphur tests) and one gas well were completed in Eddy County. Total new production was 605 bbls. daily. The most important of the completions was the Grayburg Oil Co.'s No. 3 Burch, C SW NW Section 19-17-30, in the Jackson area to the northeast of the Artesia Pool. This well proved up a little territory northward and was one of the best wells completed in Eddy County for several years. It topped the pay at 2,923 feet and was drilled to 3,101 feet. It made 520 bbls. the first 24 hours and settled down to an averaged of 260 bbls. One wildcat drilled to the southwest of the Getty Pool was a failure. This was the Avalon Oil Co.'s No. 1 State, NE cor. SE Section 26-20-27. It had 600 feet of sulphur water at 755 feet and increases at 925-30 feet. It stopped drilling at 1,000 feet, the contract depth, and was abandoned temporarily.

An important test being drilled by the Continental Oil Co. on the Rattlesnake Dome in San Juan County in its No. 24, SW NW SW Section 1-29-19, was near completion at the end of June, but results had not been definitely announced. The location is about one-quarter mile southeast of No. 17, the first test to the Pennsylvanian, which at a total depth of 6,790 feet, came in in June, 1929, for around 600 bbls. per day of oil with considerable water. Efforts to shut off the water from a horizon just above the pay were unsuccessful and the well was produced in that shape. It made 360,000 bbls. of oil before it stopped flowing. Efforts are now being made to restore production. No. 24 was drilled to 7,370 feet and the 7-inch cemented at 6,505 feet. When the plug was drilled out it began flowing mud and water, but no oil or gas. Since then it has been cleaning and swabbing and giving some indications of

MONTANA

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
BANNATYNE:							
Daily average	.....	.....	.....	65	.....	.....	
Month	.....	.....	.....	1,950	.....	.....	1,950
CAT CREEK:							
Daily average	904	892	878	872	871	857	
Month	28,024	25,868	27,218	26,160	27,001	25,710	159,981
KEVIN-SUNBURST:							
Daily average	2,881	2,839	2,694	3,784	3,506	3,345	
Month	89,311	82,331	83,514	113,520	108,686	100,350	577,712
PONDERA:							
Daily average	1,223	1,052	1,568	1,476	1,368	1,444	
Month	37,913	30,508	48,608	44,280	42,408	43,320	247,037
LAKE BASIN:							
Daily average	.....	.....	56	56	60	62	
Month	.....	.....	1,736	1,680	1,860	1,860	7,136
BUCKLEY-BORDER:							
Daily average	591	551	509	440	620	639	
Month	18,321	15,979	15,779	13,200	19,220	19,170	101,669
DRY CREEK:							
Daily average	.....	403	399	768	1,112	655	
Month	.....	11,687	12,369	23,040	34,472	19,650	101,218
Daily average	5,599	5,737	6,104	7,461	7,537	7,002	6,575
Total first six months 1932	173,569	166,273	189,224	223,830	233,647	210,060	1,196,703
Total first six months 1931	243,133	249,900	258,385	249,840	254,138	246,450	1,501,846
Total first six months 1930	253,456	233,408	267,561	298,410	304,172	289,350	1,646,357
Total first six months 1929	261,299	257,656	293,973	298,830	350,238	347,610	1,809,606
Total first six months 1928	363,370	339,679	358,112	350,520	338,272	313,260	2,063,213
Total first six months 1927	426,498	399,868	452,600	417,000	434,155	462,330	2,592,451

making a producer, but this work has not been completed at this writing.

NEW MEXICO

Summary of Wells Completed First 6 Months

County—	Comp.	Prod.	Dry	Gas
Curry	1	0	1	0
Eddy	9	695	4	1
Lea	9	61,795	0	0
San Juan	2	416	0	0
Torrance	1	0	0	1
McKinley	1	0	1	0
Total	23	62,810	6	2
Same period 1931	34	74,219	9	6
Difference	11	11,409	3	4

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	7	8,565	3	1
February	3	14,761	1	1
March	4	25,206	0	0
April	2	6,294	0	0
May	4	1,530	1	0
June	3	6,454	1	0
Total	23	62,810	6	2

COLORADO

Two new gas fields were discovered in Colorado in the first half of 1932, both of which hold out some promise for oil production when the time arrives for additional development. One of these was on the Craig Dome in Moffat County, near the town of Craig, and the other was on the Piceance Creek structure in Rio Blanco County.

The test on the Craig Dome was drilled by the Ohio Oil Co. in its No. 1 Bogenschultz, C SE SE Section 9-6n-91, following the granting of a franchise to that company by the town of Craig, 3 miles away, to supply it with natural gas. The structure has been favorably regarded for a number of years, but the horizons heretofore producing in Colorado are rather deep and this made it less attractive for wildcatting. However, a well drilled to the west on the Bell Rock structure by the Midwest Refining Co. two years ago made the Craig Dome almost a sure shot for gas in the Mesa Verde formation. The Mesa Verde is at the surface. The test was drilled with rotary equipment and was completed in March at a total depth of 2,807 feet. It encountered gas in sands in the lower Mesa Verde at 2,732-46 feet, 2,781-2,803 feet and 2,807 feet. The last sand barely was touched. It gauged 11,000,000 feet with a pressure of 1,240 pounds, the first 24 hours. Only the one well was drilled as its capacity is ample for present gas requirements. Most of the acreage is controlled by the Ohio Oil Co., the Midwest Refining Co. and The Texas Company. The gas at first was dry, but subsequently it sprayed about 10 bbls. of oil per day. Deeper drilling and wells on the flanks hold out possibilities for oil production at some future date.

The Rio Blanco County discovery was made in the Magnolia Petroleum Co.'s No. 1 Maddock, C NW SE Section 9-2s-96, on the Piceance Creek structure, 35 miles to the east of the Rangely Field. Piceance Creek is a large structure upon which 61,400 acres are held by various interests under a unitization agreement including not only the lease and permit holders but the royalty owners. The Magnolia company is the operating organization for the owners. The drilling was entirely in the Green River formation of Tertiary age, in which formation is found the famous "mahogany" oil shale beds. Two years ago a test was drilled half a mile to the west which gauged 1,876,000 feet of gas at 2,985 feet after plugging back from 5,130 feet, but this was hardly classed as a commercial discovery. No. 1 Maddock was drilled with cable tools and topped a sand at 2,914 feet. It was still in sand when drilling was suspended at 2,958 feet. There are a number of known sands below the gas horizon which hold out possibilities for oil upon being tested. No arrangements for marketing the gas production have as yet been announced.

Drilling operations in northeastern Colorado during the first half of 1932, up to within the past few weeks, were confined to the completion of several tests unfinished in last year's drilling campaign. The Greeley Oil Co.'s No. 1 Gadbois, C NW NW Section 35-6n-61, a little more than a mile to the southwest of the Platte Valley Petroleum Co.'s No. 1 Patterson, the discovery well in the Greasewood Pool, drilled the Muddy at 6,674-91 feet and found it barren except for a good show of oil. It was abandoned. It marked the southwestern edge of the pool. The Hygiene at 3,057-3,110 feet, contained a little water. The Continental Oil Co.'s No. 1 Gadbois, C SE SW Section 24-6n-61, one-quarter mile to the northeast of the Greeley well and that much nearer the discovery, flowed 27 bbls. initial at a total depth of 6,701 feet, in the Muddy sand and was abandoned when production dropped to less than 5 bbls. per day. These wells stopped all development in that direction and late this spring two wells were started by the Ohio Oil Co. and a group of interests including the Platte Valley Oil Co. and the Continental Oil Co. to the east and northeast of the producers, in which direction no tests had previously been drilled.

Ten miles to the northwest, the Prairie Oil & Gas Co. got a duster in its No. 1 O'Toole, C SE NE Section 33-7n-62, in the Crow Creek district. This well found the Hygiene at 3,590-3,615 feet and what is believed to be the equivalent of the Muddy at 7,190-7,213 feet. There was only a streak of sand at 7,213 feet. The Dakota at 7,262-72 feet drilled like hard sand or pyrite. Leases were surrendered and no further development in that area is expected.

In Larimer County the edge of the Berthoud Pool, a small field as so far developed, was found in the Raddatz Corp.'s No. 2 Fagin, NE SE NE Section 17-4n-69. It was abandoned at 3,882 feet after finding the Muddy dry at 3,790-3,805 feet. It was 60 feet lower than the same company's No. 2 State, SW cor. NW Section 16-4n-69, a few hundred feet to the southeast, which produced 50 bbls. initial from the Muddy at 3,772-75 feet. The limits of the pool on the east and south have not been defined.

One wildcat near the old Florence-Canon City Field in Fremont County was drilled to 3,415 feet, 130 feet into the red beds and was completed as a water well in the Dakotas at 2,525-85 feet and 2,615-2,740 feet. This was the Canon Heights Oil Co.'s No. 2 Harding, NE SW Section 21-18-70, north of Canon City.

Several of the gas wells operated by the Mountain Fuel Supply Co. on the Hiawatha Dome in Moffat County, Colorado, and Sweetwater County, Wyoming, began showing oil early in 1932 to such an extent that frequently the wells had to be shut in to build up sufficient gas pressure to overcome the oil. The indications are that the field, which furnishes a part of the gas supply for the Western Public Service Corp.'s gas system into Utah, is turning to oil, but no official announcement as to the situation has been given out. The discovery well, No. 1 Florence Wilson, NE cor. SE Section 22-12n-100, blew in in 1926 at 2,200 feet for 57,000,000 feet of gas per day. About eight wells have been drilled altogether. The gas is found in the Wasatch formation. Most of the producers showed some oil while drilling. The oil is medium green color, about 38 gravity and of paraffin base.

COLORADO

Summary of Wells Completed First 6 Months

County—	Comp.	Prod.	Dry	Gas
Fremont	4	0	4	0
Larimer	2	30	1	0
Moffat	1	0	0	1
Montrose	1	0	1	0
Morgan	3	0	3	0
Rio Blanco	1	0	0	1
Weld	6	27	5	0
Total	18	57	14	2
Same period 1931	19	1,186	9	3
Difference	1	1,129	5	1

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	5	6	5	0
February	3	30	2	0
March	2	27	1	0
April	1	0	0	1
May	2	0	2	0
June	5	0	4	1
Total	18	57	14	2

UTAH

Drilling operations in Utah during the first half of 1932 were confined to a few scattered wildcat wells and no discoveries were reported. Only one well was reported completed, this being a small pumper in the Virgin Field in Washington County.

UTAH

Summary of Wells Completed First 6 Months

County—	Comp.	Prod.	Dry	Gas
Washington	1	35	0	0
Total	1	35	0	0
Same period 1931	2	0	2	0
Difference	1	35	2	0

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
June	1	35	0	0
Total	1	35	0	0

IDAHO

One important wildcat was drilled to completion in Idaho, this being the Ohio Oil Co.'s No. 1 Kramlich, NW SE NW Section 5-9n-4w, on the Crystal Dome, in Payette County. The location was near a well which some time ago had a gas blowout, but which could not be gauged on account of the hole bridging and being in bad shape. The test was drilled 4,011 feet and cut 10 water sands but failed to encounter commercial gas production and was abandoned.

WASHINGTON

Considerable prospecting is taking place in the State of Washington, about 15 to 20 wells being reported in various stages from rigs to drilling over a widely scattered area, but no new discoveries were reported this year.

NEW MEXICO

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
HOGBACK:							
Daily average	314	191	254	405	404	428	
Month	9,734	5,539	7,874	12,150	12,524	12,840	60,661
RATTLESNAKE:							
Daily average	767	721	719	663	366	638	
Month	25,777	20,909	22,289	19,890	11,346	19,140	117,351
TABLE MESA:							
Daily average	68	75	69	72	77	76	
Month	2,108	2,175	2,139	2,160	2,387	2,280	13,249
ARTESIA:							
Daily average	494	457	448	504	515	543	
Month	15,314	13,253	13,888	15,120	15,965	16,290	89,830
HOBBS:							
Daily average	31,417	30,833	30,511	30,475	30,396	29,684	
Month	973,927	894,157	945,841	914,250	942,276	890,520	5,760,971
JAL:							
Daily average	866	893	905	901	840	872	
Month	26,846	25,897	28,055	27,030	26,040	26,160	160,028
EUNICE:							
Daily average	506	536	625	503	563	499	
Month	15,686	15,544	19,375	15,090	17,453	14,970	98,118
MALJAMAR:							
Daily average	580	670	736	1,038	720	1,136	
Month	17,980	19,430	22,816	31,140	22,320	34,080	147,766
LEA CITY:							
Daily average	2,174	2,062	2,067	1,983	1,902	1,758	
Month	67,394	59,798	64,077	59,490	58,962	52,740	362,461
Daily average	37,186	36,438	36,334	36,544	35,783	35,634	36,321
Total first six months 1932	1,152,766	1,056,702	1,126,354	1,096,320	1,109,273	1,069,029	6,610,435
Total first six months 1931	1,233,304	1,123,220	2,252,989	1,199,730	1,385,359	1,328,070	7,522,672
Total first six months 1930	315,549	238,532	337,528	374,880	558,589	686,040	2,511,118
Total first six months 1929	87,668	83,384	89,621	98,640	96,751	88,762	544,826
Total first six months 1928	74,865	59,981	69,347	68,160	73,470	58,860	404,683
Total first six months 1927	136,679	138,466	148,738	142,140	112,536	102,120	780,667

COLORADO

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
MOFFAT:							
Daily average	755	642	758	659	704	691	
Month	23,405	18,618	23,498	19,770	21,824	20,730	127,845
FORT COLLINS:							
Daily average	791	996	979	801	812	776	
Month	24,521	28,884	30,349	24,030	25,172	23,280	156,236
FLORENCE:							
Daily average	310	407	302	380	341	260	
Month	9,610	11,803	9,362	11,400	10,571	7,800	60,546
ILES:							
Daily average	754	745	781	811	702	603	
Month	23,374	21,605	24,211	24,330	21,762	18,090	133,372
TOW CREEK:							
Daily average	304	287	320	281	277	267	
Month	9,424	8,323	9,920	8,430	8,587	8,010	52,694
WALDREN-RANGELY:							
Daily average	.....	92	93	87	86	91	
Month	.....	2,668	2,883	2,610	2,666	2,730	13,557
ORCHARD:							
Daily average	550	419	374	367	318	296	
Month	17,050	12,151	11,594	11,010	9,858	8,880	70,543
Daily average	3,464	3,588	3,607	3,386	3,240	2,984	3,378
Total first six months 1932	107,384	104,052	111,817	101,580	100,440	89,520	614,793
Total first six months 1931	131,471	119,336	122,295	122,910	129,270	132,960	758,242
Total first six months 1930	151,387	148,860	144,274	133,590	137,175	136,950	850,636
Total first six months 1929	215,016	182,280	213,125	197,130	223,727	224,320	1,255,498
Total first six months 1928	234,635	232,625	259,563	203,610	204,383	218,940	1,353,756
Total first six months 1927	.....	.....	.....	.....	.....	.....	1,398,539

Low Allowable Well Production in East Texas Had No Effect on Field Development

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

On January 2, 1932, there were in the neighborhood of 3,275 wells producing in the vast East Texas Field, nearly 15 months after C. M. Joiner brought in the discovery well of the district in Rusk County. On July 1 when the Railroad Commission cut the per well allowable to 50 bbls. a day there were in the neighborhood of 6,500 wells showing that about 3,200 wells were completed during the first six months of 1932, the busiest average six months the field has had from a drilling standpoint, although it might not have been but for the fact that Governor Sterling shut the field in in August, 1931, to prevent an orgy of drilling and overproduction. East Texas has been the busiest, and practically the only busy field in Texas during the first half of the year, with small chances of seeing drilling slackened during the next three months. There was an average of approximately 530 completions reported each month from January 1 to July 1.

All major pipe line construction into the field had been completed in 1931, only oil gathering lines, gas gathering lines, and some small connecting lines being laid during 1932. There were no new refineries constructed in the district during the first six months of 1932, but seven gasoline plants were erected during that time, the Humble Oil & Refining Co. having erected two during the previous year. There was also no steel storage erected in 1932, the former year having witnessed a 10,000,000-bbl. construction program, much of the tankage having been dismantled in other parts of the State and moved to East Texas where it was reconstructed.

Numerous Extensions

It was an exceedingly busy six months for the district. The field was extended farther to the north in Gregg and Upshur Counties; another county was added to the list of producing counties; the field was extended farther to the south by oil producers, and a gas producing area was opened in that part of the field. The limits of the field were defined in every direction but one, that one being the extension area to the southwest in Cherokee County.

From January 1, 1932 to July 1, 1932, there were nine orders issued by the Railroad Commission curtailing the per well allowable as follows: February 5 to 75 bbls. from the previous allowable of 100 bbls.; March 16 to 72 bbls.; April 1, 71 bbls.; April 16, 67 bbls.; May 1, 61 bbls.; May 16, 59 bbls.; June 1, 54 bbls.; June 16, 51 bbls.; July 1, 50 bbls. The maximum daily allowable of the field was 400,000 bbls. up to March 16, when it was cut to 325,000 bbls., the present limit. A group of independent operators endeavored to obtain a 51-bbl. allowable extending through July and August, which would have run the maximum allowable over 325,000 bbls. per day, as an average of 20 wells per day were being completed. The Railroad Commission seemed favorable toward such an increase, but finally signed the new order cutting the per well allowable to 50 bbls. for the succeeding 15 days in order to hold down production.

Several by-passes were found on pipe lines and wells during the fore part of the year, and many indictments were turned in for "by-passing" and "theft" of oil, but this is the only legal action taken in regard to the matter, and it is doubtful whether or not the several cases will ever be tried in the courts.

The Railroad Commission held a hearing at Dallas on May 10 at which time it ordered that meters be placed on all trunk lines leading from the field and at all refineries and loading racks in the district. The meters were to be installed within 30 days, and were so ordered to prevent further by-passing and alleged theft of oil, and running oil above the prorated allowable from each well. Meters are supposed to give a check on all oil produced and run in the district each day. A set of records are also to be made up each day in regard to the amount of oil produced and run through trunk lines, to local refineries, and from loading racks in order to detect by-passing and theft of oil.

Injunctions Galore

Many injunctions were issued by Judge Bryant of the Federal court restraining the Railroad Commission from interference with the production and running of oil from some of the leases in the district, and other injunctions were issued against operators, and counter injunctions issued to prevent operators from producing their wells above the allowable. All power was stripped from the military authorities in the district when the three-judge Federal court ruled that the governor did not have authority to levy martial law and interfere with production and transportation of oil in the district. When this finding was made known the Railroad Commission then took over the proration problems of the field, and the military was retained only to help enforce the commission's orders. There are but few national guardsmen left in the district to help enforce the commission's orders. There have been more proration troubles, law suits, injunctions, threats and orders issued in regard to curtailing production and prorating East Texas than in all the rest of the pools of the State, or for that matter, perhaps the entire oil-producing states, and the trouble is not yet over, according to many operators and those who are closely watching the field and the situation.

Cases of Sabotage

Several cases of sabotage have been reported in the district, one pipe line having been cut and several hundreds of barrels of crude oil allowed to flow on the ground, and another pipe line dynamited. This violence was used against two companies which were not in accord with proration rules in the district. Several other minor troubles were experienced by major as well as independent companies.

Drilling Costs Drop

Drilling costs in the field dropped to as low as $1.55 per foot. Contractors took contracts at these figures in order to keep their rigs and men busy, and knowing that they could realize hardly any profit out of the jobs. It formerly cost $30,000 to drill a well in the district, but that price is now down to around $12,000.

Practically all of the second-hand equipment and junk from all other parts of the State and other producing states was hauled into the district to be used in drilling and equipping the wells, but the supply has almost been exhausted, and more new equipment and pipe is now being purchased. The next six months will see a great increase in the purchase of new supplies and equipment.

Salt Water Encroachment

At the present time there are 106 wells which are making salt water, almost every week seeing the addition of one or more wells showing water on the west edge of the field. A considerable number of wells which were formerly drilled too deep, and which tapped the salt water stratum, have been plugged back successfully, entirely shutting off the water, while others have only been partly successful in this effort, water still being produced with the oil. Separator and tank companies have manufactured several different water knockouts which have been tried or are now being tried in the field to separate the water from the oil, and chemicals have been in use for over a year in this work.

One of the most important and ominous salt water showings in the field made its appearance in the British American Oil Co.'s No. 1 Stone in May. This well, having a subsea datum of minus 3,298 feet at bottom of hole, is located in the heart of the Joiner area, Rusk County, and is surrounded by wells which as yet have shown no water. Efforts have been

EAST CENTRAL TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
BOGGY CREEK:							
Daily average	1,096	810	997	911	994	1,275	
Month	33,978	23,496	30,902	27,329	30,818	38,245	184,768
CURRIE:							
Daily average	.....	.....	.....	.....	.....	185	
Month	.....	.....	.....	.....	.....	5,540	5,540
POWELL:							
Daily average	2,388	2,794	2,237	2,568	2,601	2,504	
Month	74,025	81,022	69,349	77,046	80,629	75,115	457,186
MEXIA:							
Daily average	2,725	2,461	2,667	2,514	2,727	2,760	
Month	84,479	71,362	82,675	75,425	84,539	82,799	481,279
RICHLAND:							
Daily average	40	36	36	26	24	36	
Month	1,240	1,041	1,114	774	747	1,076	5,992
SATIN:							
Daily average	.....	.....	.....	26	26	22	
Month	.....	.....	.....	783	805	659	2,247
VAN:							
Daily average	41,903	46,668	48,913	49,281	50,455	53,655	
Month	1,298,998	1,353,375	1,516,304	1,478,437	1,564,112	1,609,662	8,820,888
WORTHAM:							
Daily average	84	166	147	132	135	134	
Month	2,607	4,810	4,558	3,951	4,181	4,017	24,124
Daily average	48,236	52,935	54,997	55,458	56,962	60,571	54,846
Total first six months 1932	1,495,327	1,535,106	1,704,902	1,663,745	1,765,831	1,817,113	9,982,024
Total first six months 1931	1,249,782	1,185,856	1,455,154	1,509,950	1,689,453	1,787,686	8,877,881

EAST TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
LONGVIEW:							
Daily average	114,520	110,223	119,576	133,446	133,471	125,015	
Month	3,550,122	3,196,462	3,706,851	4,003,370	4,137,601	3,750,457	22,344,863
KILGORE:							
Daily average	111,192	102,728	107,348	117,437	109,302	102,667	
Month	3,446,952	2,979,122	3,327,784	3,523,115	3,388,363	3,079,998	19,745,334
JOINER:							
Daily average	105,165	97,004	100,230	104,444	102,625	105,559	
Month	3,260,118	2,813,119	3,107,137	3,133,316	3,181,369	3,166,783	18,661,842
Daily average	330,877	309,955	327,154	355,327	345,398	333,241	333,802
Total first six months 1932	10,257,192	8,988,703	10,141,772	10,659,801	10,707,333	9,997,238	60,752,039
Total first six months 1931	110,515	701,739	2,900,925	7,479,756	9,658,710	10,680,539	31,532,184
TOTAL EAST CENTRAL AND EAST TEXAS:							
Total first six months 1932	11,752,519	10,523,809	11,846,674	12,323,546	12,473,164	11,814,351	70,734,063
Total first six months 1931	1,360,297	1,887,595	4,356,079	8,989,706	11,348,163	12,468,225	40,410,065
Total first six months 1930	669,523	678,455	813,799	1,030,567	1,194,501	1,229,886	5,616,731
Total first six months 1929	675,021	579,471	666,569	605,389	608,505	577,820	3,712,775
Total first six months 1928	797,384	727,284	780,967	727,455	736,122	706,269	4,475,481
Total first six months 1927	1,479,568	398,208	1,442,554	1,254,690	1,066,028	1,032,720	7,673,768
Total first six months 1926	1,928,851	759,548	1,822,614	1,763,970	1,703,853	1,557,780	19,536,616
Total first six months 1925	6,376,886	518,416	4,888,917	4,111,490	3,863,375	3,379,740	27,138,824

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made to plug back and shut off the water, but so far they have been unsuccessful. It is located in the M. J. Pru Survey.

The Sinclair Prairie Oil Co., which temporarily abandoned its No. 1 Amanda Wiley, a test drilled in 1931 on the extreme western side of the Joiner area, Smith County, went back into the hole during 1932, plugged back from total depth of 3,894 feet to 3,494 feet, then drilled out to 3,855 feet and made a 100 bbl. well out of it, after it was considered a total loss when first drilled. It is located in the James Jordan Survey.

Salt water wells and dry holes have been drilled almost from the farthermost south end of the field on the west edge through Smith, Rusk and Gregg Counties and on the northwest in Upshur County. Only one area is left unpolluted on that side, and that one, located in Cherokee County, is expected to show water in the near future, or to be defined by a dry hole not many locations to the south and west.

Opening Cherokee Extension

Merry Brothers and Perini of Tyler drilled the first producer in the Cherokee County extension, completing the well in January, 1932, thereby extending the Joiner area farther to the southwest and adding the fifth county to the producing area of the mammoth field. The well is located on the Annie Kelly farm in the M. De Los Santos Coy Survey. It cored sand from 3,677-79 feet and made 32 bbls. in 10 minutes through 1-inch tubing choke. No wells have yet been drilled southwest of it. Clopton and others abandoned their No. 1 Pace 2 miles south of the Kelly producer, thereby limiting the field in that direction.

Gas Area Opened

Peyton Brothers drilled in a surprise well in the extreme southern end of the Joiner area, Rusk County, completing the first dry gasser in the field and opening up a dry gas area on the south end. The well is located on the Perry farm in the L. N. Sparks Survey, and made nearly 60,000,000 feet of dry gas when completed at a total depth of 3,718 feet, or minus 3,283 feet. Ten million feet of gas is now being produced in the well, from which drip gasoline is obtained, the well showing gasoline saturation after it had flowed awhile.

There are four other gas producers in the area: Sinclair Prairie Oil Co.'s No. 1 Ashby, which is producing 3,000,000 feet of gas per day, and the same company's No. 1 Fletcher which is shut in. Also Stanolind Oil & Gas Co. and Pure Oil Co.'s No. 1 Lacy, from which 1,500,000 to 3,000,000 feet of gas per day is taken for drilling purposes. The Wemack Oil Co.'s gasser is farther south, and was estimated as good for 35,000,000 feet when it was completed at a total depth of minus 3,302 feet. It is located on the Arnold farm in the William Christian Survey, and is shut in for lack of outlet. The Sinclair Prairie Oil Co. laid a 6-inch line from its wells to several leases to the north and is taking gas for drilling and production purposes, selling part of it to other companies for the same purpose.

Geologists and petroleum engineers estimate that there is in the neighborhood of 5,000 acres of gas-producing area in the south end of the field, which has apparently been disassociated from the oil-producing area by the Sun Oil Co.'s Alph Lee well, located in the Peter Tipps Survey, which failed to flow its allowable when completed, and required pumping equipment to produce its allowable. It is approximately midway between the nearest oil and gas producing wells, and therefore is considered as the division point between the two producing areas. Total depth of the Sun Oil Co. well is 3,659 feet.

Extended Into Upshur County

Cranfill & Reynolds' No. 1 Rash, in the E. N. Eubanks Survey, Upshur County, marked a 3½-mile northern extension of the Lathrop area when it was completed during the forepart of the year for a small well at a total depth of 3,728 feet, or minus 3,399 feet. This placed the hole far below the known water level in the main body of the field, and the well was first considered as opening a separate pool. This belief was accentuated by the fact that oil in this well was about 5 degrees lower in gravity than the oil in the main pool, or around 35 degrees. It made an initial production of 185 bbls., but production dwindled, and the well is now on the pump. The north end of the field is defined by this well, and the Maddox Development Co.'s No. 1 Willie Starr in the C. H. Cooper Survey, approximately 2 miles east. This test is not yet completed, but looks good for only a small well, and is showing considerable salt water.

Eslick and others' No. 1 Whitehurst, in the McKinney & Williams Survey, northern Gregg County, extended production a mile farther north of the Lathrop area the middle of March when it was completed as a producer at a total depth of 3,628 feet, and a well on the Thomas farm, another mile farther northeast, extended the field in May. These wells are southeast of the above two mentioned wells, and on the eastern side of the Lathrop area.

Pipe Line Committee Busy

The East Texas Pipe Line Committee was organized during the forepart of the year to meet and discuss the problems of connecting to new producers as they were completed, but the committee has had its hands full with the hundreds of completed wells, each day adding an average of 20 new wells to the situation, all of which however are not outside wells, many of them belonging to companies affiliated with pipe line companies, and therefore are connected as they are completed.

Several of the purchasing companies are not connecting to any more outside wells, which throws a burden on those pipe line companies which are trying to find connections for the newly completed wells so as to prevent distress oil from being thrown on the market, thereby weakening the price structure. At the present time there is not a large number of unconnected wells, and with the agreeable July 1 order the pipe line companies bent extra efforts to connect with all unconnected outside wells, as per the Railroad Commission's request.

With the field allowable held to 325,000 bbls. per day the purchasing companies will be able to cope with the pipe line situation, and the price for crude from the district may receive an increase in the near future. The present price is 98 cents per barrel, a 15-cent increase in April boosting it to that amount.

112,000 Proven Acres

There now are 112,000 proven acres in the East Texas Field, and if one well is drilled to every 10 acres, as the outcome now appears, there will be at least 11,000 wells eventually drilled in the district. The Railroad Commission formerly issued an order that only one well would be drilled to every 20 acres, but this rule is not being observed, and some of the independent operators who own small tracts are subdividing these tracts and selling them to other operators, or apparently selling them, or are drilling more wells on the tracts themselves, even splitting four and five-acre tracts into two leases, and drilling another well on the subdivided tract, although one well is already producing on the original small tract. It is this subdividing of small tracts which is causing trouble for the operators in the way of obtaining pipe line connections for such extra wells, the pipe line companies and all other operators frowning on such practice.

Important Lease Trades

Several large lease trades were made in the field during the first six-month period, one of the largest being the purchase by Gant, Knox & Garvin from Adams & Lyles, the Kirby Oil Co. and Moody-Seagraves. The deal included 800 acres in the Maria V. Pena Survey, Rusk County, and a cash consideration of $200,000 and $800,000 out of the first seven-eighths of the oil produced.

The largest deal in the field involved 1,500 acres held by the Golding-Murchison Oil Co., including 50 producing wells, located in Rusk and Gregg Counties. The American Liberty Oil Co. made the purchase. This was similar in size to the sale of the Bateman block in the Kilgore area to the Humble Oil & Refining Co. after the Bateman discovery well was brought in on the block opening the Kilgore area, and also similar to the Farrell sale to Yount Lee, Inc., in the Lathrop area of Gregg County. Golding and Murchison are directors in the newly formed American Liberty Oil Co. of Chicago, which has a Delaware charter.

The Simms Oil Co. purchased 800 acres in the north end of the Lathrop area, lying across the Gregg-Upshur County line in the Marshall Mann Survey, acquiring a three-quarter interest, and obtaining controlling interest in the W. R. Nicholson tract. Consideration was in the neighborhood of $35,000 in cash and an assumed oil payment of $1,000,000 to be paid out of three-sixteenths of the production. The Simms Oil Co. transferred a one-quarter interest in all partnership leases held with the Stanolind Oil & Gas Co., giving the latter company a three-quarters interest in these leases, most of which were located in Gregg County. The latter company is operating the leases.

The Stanolind Oil & Gas Co. also purchased a half interest in the Pure Oil Co.'s Graham Lake block comprised of several hundred acres in the south end of the field, Rusk County. Stanolind has drilled several wells on this block, one of them proving a dry gasser.

Construction in the District

As already mentioned the main construction in the field during the fore part of 1932 was the building of gasoline plants and the laying of gas lines from these plants to leases which supply the plants with casinghead gas.

The Arkansas Gas & Fuel Co. put its 5,000,000-foot capacity plant in the Lathrop area in operation in the early part of the year, the plant processing gas taken from the company's leases and Roeser & Pendleton and Yount Lee leases in the Lathrop Pool, Gregg County. It has four 8-inch field lines carrying the gas to the plant.

R. L. Crook & Co. built a small plant on the Cox & Hamon fee in the W. H. Castleberry Survey, Gregg County, and the Gladewater Refining Co. erected a 4,000,000-foot plant in connection with its refinery at Gladewater.

The Gulf Production Co. placed its Overton plant in operation on May 26. This plant has a capacity of 5,000,000 feet per day, and approximately 30 miles of gas line was laid to connect it with leases in Rusk County.

The Lisbon Gasoline Co. of Shreveport constructed a plant on the Mid-Kansas Oil & Gas Co.'s E. E. Moore lease in the Cadene Survey in the south end of the Joiner area, Rusk County.

The East Texas Natural Gasoline Co. was organized to construct a 1,250,000-foot plant on the W. P. Watson lease in the Mary Van Winkle Survey, in the Kilgore area, Gregg County. This plant is now ready for operation.

With the small daily oil allowable per well, and the small resultant gas production, many wells have to be connected by the gasoline plants in order to obtain sufficient gas for operating purposes. This has prevented the construction of other and larger plants in the district. Casinghead gasoline is being shipped from these plants by tank cars.

The Humble Oil & Refining Co. erected the first plants in the field, one at Kilgore and one at London. These were completed the latter part of 1931.

There are small chances of other plants

Fewer Wells Completed in Old Eastern Fields But of Higher Initial Output

By LEON H. WALTER

Completions in the Eastern Field, made up of the Pennsylvania grade oil pools of New York, Pennsylvania, southeastern Ohio and West Virginia, and the New York-Pennsylvania gas field during the first six months of 1932 showed a decline compared with the same period in 1931, but registered a gain in initial output and a complete reversal of the 1931 conditions.

The first half of 1932 showed the Allegany-Bradford districts, the most northerly fields, to be the only areas in the Eastern Field to show a gain in completions and production with 231 more wells and 1,290 bbls. more initial production than in 1931. While the upper fields were recording a large gain in operations, the lower districts were registering a large decline in completions and production. In southwest Pennsylvania the completions and production in the first half of 1932 were barely half of the showing in the same period last year.

In southeast Ohio there was a large decline in completions and production and in West Virginia the number of completions, production and gassers showed a decided shrinkage for 1932 as compared with 1931. In the Tioga-Wayne gas field in Pennsylvania and New York work fell off during the first half of 1932 as compared with the previous period. The Venango-Clarion and Butler-Armstrong districts had fewer completions in 1932 and the Middle Field was even with the 1931 figures.

The 1931 report showed most of the activity in the lower districts of the Eastern Field and the 1932 report showed the major operations in the upper districts.

Drastic curtailment continued to be the rule throughout the Eastern Field during the first half of 1932. The gain in Bradford-Allegany production is attributed to the drilling in of wells to complete the five spot method from eight months to a year after the drilling in of the four pressure wells used in the flood area.

A summarized comparison of the nine areas in the Eastern Field for the first six months of 1932 and 1931 shows as follows:

	Comp.	Prod.	Dry	Gas
January-June, 1932	738	2,884	111	147
January-June, 1931	882	2,231	184	386
Difference	144	653	73	239

Drilling throughout the first six months of 1932 was confined to tested areas with the exception of several deep tests for gas in Potter County which were found to be productive.

A field-by-field comparison for the six-month period shows the following:

EASTERN FIELD

Completions by Districts First Half of 1932

Field—	Comp.	Prod.	Dry	Gas
Allegany	87	587	2	1
Bradford	256	883	0	0
Venango-Clarion	36	30	3	8
Butler-Armstrong	16	20	2	3
Wayne-Tioga-Potter	43	3	24	18
Middle Field	16	24	2	2
Southwest Pa.	30	67	13	10
Southeast Ohio	117	980	42	12
West Virginia	137	290	23	93
Total	738	2,884	111	147

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	150	623	15	34
February	133	576	21	37
March	113	453	21	17
April	93	281	14	15
May	124	483	16	23
June	125	468	24	21
Total	738	2,884	111	147

Completions by Districts First Half of 1931

Field—	Comp.	Prod.	Dry	Gas
Allegany	25	38	1	2
Bradford	87	142	0	0
Venango-Clarion	41	33	5	14
Butler-Armstrong	19	11	8	4
Wayne-Tioga-Potter	99	0	33	63
Middle Field	16	40	0	0
Southwest Pa.	64	132	17	34
West Virginia	322	166	51	222
Southeast Ohio	209	1,669	69	47
Total	882	2,231	184	386

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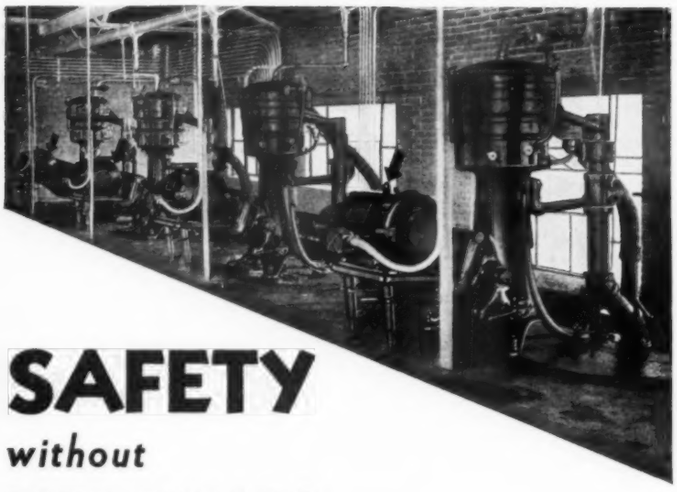

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being erected in the field, unless they are located in the south end to process gas from wells in the gas area in Rusk County. The Stanolind Oil & Gas Co. may erect a plant later in this area, due to the fact that it is interested in and operating a large block of acreage there.

Van Field

Several dry holes were drilled in the Van Field in Van Zandt County during the past six months, the majority of them located on the southwest, west and northwest side, including a Trinity sand test on the V. T. Davis farm in the Nacogdoches County School Survey in the north end of the field, which well was abandoned at a total depth of 7,501 feet. The Pure Oil Co. drilled this well, and also drilled a Nacatoch sand test in the same area, but it, too, was a failure, and was abandoned at a total depth of 3,036 feet.

Drilling of these dry holes was responsible for several hundred acres of leases being relinquished, and there is the possibility of this acreage being leased by other operators for the purpose of drilling other shallow tests to try to pick up the shallow pay horizon found in the Luther well in the William Daniel Survey in the extreme northern part of the field. The Luther was never completed as a commercial producer, but had a good showing of oil, leading some operators to believe that better wells might be found in the same horizon.

The Humble Oil & Refining Co. purchased 8½ acres and two producing wells in the Carroll district of the field this year, thereby giving complete control and ownership of the field to five companies which held acreage in the unit plan. The Florey Oil Co. held a lease on the small tract.

There are 311 oil wells in the Van Field at the present writing.

Falls County

C. C. Curtis (Dixie Oil Syndicate) brought in a small shallow producer in the Pedro Zarza Survey, Falls County, near the McLennan County line, the first week in February, 1932, thereby opening up the possibility of another shallow field for the county.

The Georgetown lime was logged at 1,002 feet, the hole filling with oil soon after topping this formation, and the well was shut down to build tankage and make test. The well was estimated good for from 150 to 175 bbls. per day of 35 gravity oil. Hodges drilled a test nearby, which was completed at a total depth of 972 feet, estimated good for 50 bbls., but these were the only two successful tests drilled in the area, several tests being abandoned as dry, thereby proving the pool a freak, possibly producing from a crevice.

A small pipe line was laid from the pool to a loading rack on the railroad, 1½ miles to the south, near Gurley, and the oil is shipped out by tank car.

In the Powell Field

The Humble Oil & Refining Co. sold 44 producing wells and leases, and some warehouse stock in the Powell Field, Navarro County, to Olsen Brothers of Tyler for $50,000 in cash and a like amount out of one-third of the oil produced from the wells. The Humble company deemed it inadvisable to retain and produce the wells due to the large quantity of salt water in the wells making production an expensive problem. Olsen Brothers plugged some of the wells, moving off the equipment to leases in East Texas. The other wells are being worked over in an effort to make them pay for themselves and for producing them.

The Tidal Oil Co. also sold all of its producing holdings in the Powell Field.

Among the Wildcats

There were 44 wildcat tests completed in the entire East Texas and East Central Texas districts during the first six months of the year, with 63 drilling wells active or semiactive at the close of June. Nearly every county in the two districts was represented with at least one wildcat test on the weekly drilling report. Several interesting tests were drilled in Upshur County, two in Henderson, several in Harrison and Marion Counties, Smith, Wood and Bowie Counties, and more blocks are being taken in different counties for other tests. The next six months of the year will no doubt see just as active, if not more active wildcat play in the district, due to the fact that more fields are needed for the industry, and it is believed that other fields will be found in this district.

Very Active Half Year

There were 2,823 completions in the East Central and East Texas area in the first half of the year as against 1,056 in the same period last year. The initial production in the first half of 1932 was based on short time gauges and means nothing if used for comparative purposes. Some authorities have put an arbitrary average of 2,600 bbls. per well as the potential initial production of oil wells in the East Texas area and on this basis it might be said that the total initial production of East Texas alone was 6,986,200 bbls. from 2,687 completed oil wells. As a matter of fact most of the wells were permitted to produce but a very short time because of the low limit of daily production permitted to each well during the six month's period. It will always be a matter of controversy as to what the real initial production of East Texas wells would have been had they all been permitted to produce a full 24 hours after completion.

In the first half of last year there were no restrictions and the initial production figures were really representative of what the wells could do. The oil wells of that period averaged 2,212.63 bbls. per well in initial production for the whole field.

In the three most important counties, Rusk, Gregg and Van Zandt, the average initial production in the first half of last year when the wells flowed the full 24 hours in many cases, was as follows: Gregg County—244 oil wells, 385,389 bbls. initial production, average, 1,579 bbls. per well; Rusk County—605 oil wells, 1,427,765 bbls. initial production, average, 2,360 bbls. per well; Van Zandt County—62 oil wells, initial production, 238,686 bbls., average 3,850 bbls. per well.

In mid-summer of 1931 the field was put in control of the military and production greatly restricted to save the industry from financial ruin and to save the East Texas Field from physical ruin, and thereafter there were no big wells permitted to flow wide open for a day. It has been that way ever since, which accounts for the very small initial production credited to the wells this year.

EAST CENTRAL AND EAST TEXAS
Summary of Completed Wells in First Half of 1932

County—	Comp.	Prod.	Dry	Gas
Bowie	3	0	3	0
Camp	1	0	1	0
Cherokee	7	272	3	0
Dallas	3	0	3	0
Delta	2	0	2	0
Ellis	2	0	2	0
Fannin	2	0	2	0
Gregg	1,540	120,101	9	0
Henderson	2	0	2	0
Hunt	1	0	1	0
Jasper	1	0	1	0
Lamar	2	0	2	0
Leon	2	0	2	0
Morris	1	0	1	0
Nacogdoches	7	0	7	0
Polk	2	0	2	0
Rains	2	0	2	0
Red River	5	0	5	0
Rusk	845	64,486	22	4
San Augustine	1	0	1	0
Smith	174	12,032	7	0
Titus	1	0	1	0
Upshur	178	11,450	8	0
Van Zandt	38	3,596	11	2
Wood	1	0	1	0
Total	2,823	211,937	101	6

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	338	36,554	11	0
February	343	29,037	14	3
March	404	29,072	25	1
April	499	34,074	27	1
May	601	44,192	14	1
June	638	39,008	10	0
Ttl. 1st 6 mos.	2,823	*211,937	101	6
First 6 mos. 1931	1,056	2,071,016	113	7
Difference	1,767	1,859,079	12	1

*Initial production in first half of 1932 represents only short time gauges ranging from a few minutes upwards. Initial production in first half of 1931 represented first 24-hour production, the field having had no restrictions applied to it during that period.

Thirteen Oil and Gas Pools Discovered in First Half of Year in Southwest Texas Fields

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

Production was found in 13 wildcat spots in Southwest Texas during the first six months of 1932, and of the 369 completions during the six months 63 per cent were drilled in 13 per cent of the counties, or in 5 out of the 37 counties listed.

Of the new producing areas found in Southwest Texas the most important and the only one thus far to get under way for development was that in northern Duval County where the equivalent of two new pools are being developed.

Along with the new proven pools in wildcat territory there have been some sands found, notably that in southern Colorado County, proven for production but with no completed wells, and new sands found in some old fields, notably in the Saxet Field in Nueces County.

All told, while the number of completions is the smallest in many years, yet the importance of the development work of the first six months of 1932 has been quite as great as in most years and the number of oil wells and gas wells completed in wildcat territory a little greater than in most periods of six months in Southwest Texas.

Caldwell, Duval, McMullen and Starr Counties all had double headers. Production in wildcat territory was found in two places in each county and in one spot in each of Brooks, Guadalupe, Jim Wells, Nueces and Webb Counties. The five counties in which more than half of all the drilling took place are Zapata, Starr, Bexar, Bee and Duval. The Cooksey and Eckert Pools, with shallow production, account for most of the drilling in Bexar County, the Pettus west extension in Bee, the Government Wells area in Duval, the Los Olmos Pool in Starr and the Escobas in Zapata.

The Palo Blanco district in northwestern Brooks County has two sands in one new pool to its credit. Allen & Morris' No. 1 Holbien-Wormser, 450 feet from the northeast line and 7,325 feet from the southeast line of the 952-acre tract in the Maguellas grant, blew in and ran wild at 1,819 feet estimated at around 25,000,000 feet of gas at least. The hole was lost when the drill stem was blown upward and half of it dropped back in, causing a hopeless fishing job. The No. 2 Holbien-Wormser, located 450 feet from the northeast line and 7,525 feet from the southeast line of the same tract, placing it 300 feet northeast of No. 1, was completed at 1,190 feet for an estimated 20,000,000 feet of gas with 500 pounds pressure. It topped the sand at 1,170 feet. This new production is a half mile west of the production found in one test at 3,814 feet on the Holbien-Wormser land and in one at 4,112 feet on the Lassater Ranch by the Houston Oil Co. in 1929 and 1930, each of the Houston Oil Co. wells making around 40,000,000 feet of wet gas. The Allen & Morris tests were started with the idea of being deep tests but found the shallow gas and completed there for fuel to be used in further drilling for deep production.

Caldwell County

Caldwell County opened up two new producing spots. C. J. Webster Oil & Gas Co.'s No. 1 McCrory was a 60-bbl. well in the top of the Edwards lime at 2,279 feet and was put on production. Later they tried to improve it by taking in the Buda lime section by shooting the casing at that point and lost the hole and as this was being written were starting another test. This test is northeast of Luling several miles and between the Dale Field on the northeast and the Luling Field on the southwest.

Bob Rose's No. 1 Pierce, 2½ miles northwest of the town of Luling and the same distance southeast of the Luling Field, is producing from a crevice, total depth 2,114 feet, and the last recognized formation Austin chalk, came in for around 3,000 bbls. daily. A pipe line was laid to the Bobrose refinery north of Luling and the well choked down considerably and it has been supplying that refinery. In about two months it made around 100,000 bbls. of oil. Since then the Empire Gas & Fuel Co. brought in a south offset to it and west offsets are being drilled. One test a mile north, drilled to the Edwards lime, was dry.

Guadalupe County

In addition to those in Caldwell County the Balcones fault zone saw the opening of one other pool. Sal Mar Oil Co.'s No. 1 Zunker, 6 miles due east of Seguin in Guadalupe County, at 2,042 feet and in the chalk topped at 2,022 feet with elevation 449 feet came in making 27 gravity oil that has all the characteristics of Luling Edwards lime oil. It was shut in and opened one hour daily and made 11 bbls. each hour. No arrangements were completed for disposing of the oil as the first six months' period closed but several other locations had been made and some were in process of getting started to drill. This production is 15 miles from the Luling Pool Field and on a line extended down through the middle of the Luling Field lengthwise.

Jim Wells County

In northern Jim Wells County, 5½ miles from the west line and 8 miles from the north line of the county, Gulf Production Co. completed No. 5 Shaeffer, 1,000 feet from the south and east lines of Survey No. 89, S.A.&M.G. Railway, at 2,457 feet for around 40,000,000 feet of gas. It had been drilled to 3,044 feet and was plugged back to 2,457 feet where it had a blowout when it was being drilled. It gauged 900 pounds shut in, and 690 pounds flowing through three-eighths inch choke. Casing was set at 2,272 feet with 155 feet of perforated liner at the

SOUTHWEST TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
AGUA DULCE:							
Daily average	3	10	10	10	10	14	
Month	95	293	316	306	315	439	1,755
BEXAR COUNTY:							
Daily average	393	397	453	427	487	432	
Month	12,188	11,519	14,045	12,812	15,093	12,972	78,628
BRANYON:							
Daily average	21	60	36	27	27	27	
Month	650	1,748	1,113	810	839	809	5,969
BRUNER:							
Daily average	7,982	7,906	8,455	9,371	9,413	8,556	
Month	247,440	229,278	262,103	281,127	291,809	256,683	1,568,440
BUCHANAN:							
Daily average	65	67	65	65	73	73	
Month	2,015	1,940	2,017	1,948	2,261	2,187	12,368
CHAPMAN:							
Daily average	1,817	1,641	1,547	1,329	1,326	1,291	
Month	56,322	47,583	47,957	39,865	41,103	38,733	271,563
DALE:							
Daily average	227	233	242	252	213	215	
Month	7,030	6,759	7,504	7,561	6,602	6,452	41,908
DARST CREEK:							
Daily average	16,820	17,644	15,181	17,006	17,244	18,007	
Month	521,425	511,678	470,615	510,183	534,568	540,209	3,088,678
GOLIAD COUNTY:							
Daily average	.....	62	103	109	130	101	
Month	.....	1,793	3,192	3,272	4,038	3,025	15,320
KINGSVILLE:							
Daily average	101	93	87	132	100	111	
Month	3,138	2,694	2,699	3,953	3,111	3,336	18,931
LARREMORE:							
Daily average	71	77	79	71	70	70	
Month	2,205	2,239	2,445	2,129	2,163	2,115	13,296
LULING:							
Daily average	7,510	7,480	7,467	7,496	7,233	7,165	
Month	232,812	216,928	231,478	224,884	224,229	214,945	1,345,276
LYTTON SPRINGS:							
Daily average	461	566	575	568	590	581	
Month	14,296	16,410	17,823	17,044	18,286	17,422	101,281
MANFORD:							
Daily average	88	83	94	100	104	104	
Month	2,720	2,408	2,914	2,995	3,223	3,109	17,369
McMULLEN COUNTY:							
Daily average	19	41	44	43	47	104	
Month	582	1,184	1,365	1,293	1,455	3,131	9,010
MEDINA COUNTY:							
Daily average	22	23	22	22	22	22	
Month	685	633	680	665	683	658	4,004
MINERVA:							
Daily average	404	404	404	402	404	408	
Month	12,529	11,716	12,528	12,069	12,522	12,229	73,593
MIRANDO DISTRICT:							
Daily average	16,766	17,445	17,124	16,470	16,580	16,013	
Month	519,746	505,900	530,849	494,106	513,977	480,405	3,044,983
PETTUS:							
Daily average	3,873	6,742	6,035	1,032	4,818	4,608	
Month	120,060	195,515	187,085	30,960	149,354	138,226	821,200
SAXET:							
Daily average	800	1,035	1,289	1,325	1,149	1,053	
Month	24,807	30,019	39,953	39,747	35,615	31,592	201,733
SOMERSET:							
Daily average	1,036	1,056	1,085	1,051	1,048	977	
Month	32,113	30,628	33,634	31,533	32,489	29,319	189,716
LOS OLMOS:							
Daily average	.....	.....	84	89	84	.....	
Month	.....	.....	2,603	2,666	2,601	.....	7,870
THRALL:							
Daily average	35	35	32	37	39	38	
Month	1,080	1,013	997	1,111	1,208	1,141	6,550
WHITE POINT:							
Daily average	52	58	57	51	49	54	
Month	1,602	1,689	1,760	1,528	1,516	1,632	9,727
YOAST:							
Daily average	189	181	182	176	173	170	
Month	5,857	5,247	5,648	5,286	5,363	5,108	32,509
DUNLAP:							
Daily average	5	2	15	24	2,169	1,464	
Month	155	58	461	728	67,234	43,917	112,553
Daily average	58,760	63,340	60,767	57,689	63,602	61,659	60,959
Total first six months 1932	1,821,552	1,836,872	1,883,784	1,730,681	1,971,657	1,849,784	11,094,330
Total first six months 1931	2,698,916	2,362,696	2,230,534	2,211,571	2,059,458	2,000,546	13,563,721
Total first six months 1930	1,981,174	1,813,895	1,977,584	1,893,330	2,188,405	2,421,341	12,275,729
Total first six months 1929	1,453,427	1,527,677	2,021,412	2,199,207	2,413,599	2,424,277	12,039,599
Total first six months 1928	825,036	789,190	839,945	807,553	804,627	774,570	4,840,921
Total first six months 1927	1,245,673	1,075,312	1,167,584	1,112,760	1,092,233	1,020,180	6,713,732
Total first six months 1926	1,233,397	1,100,720	1,220,842	1,176,630	1,208,163	1,062,020	7,101,772

bottom and the gas was turned into the line of the United Gas Co.

This well is approximately 2 miles north and a little west of where Carsal Oil & Gas Co. last year on the McGill farm brought in gas production at 2,804 feet in one well. No further developments has taken place around either well.

McMullen County

New production was found in two areas in McMullen County. Jacob, Buzzini & Pickett completed No. 2-A Jacob in northeastern McMullen County, close to the Live Oak County line, at 962 feet flowing initially by heads around 70 bbls. daily. It is approximately 900 feet from the east line and 1,000 feet from the north line of W. H. Jacob Survey No. 8. Since then the company has completed No. 3-A Jacob, about 750 feet northwest, at 960 feet for another 70 bbls. No. 1-B Jacob, 1¼ miles northeast and across the line in Live Oak County, in sand topped at 1,054 feet is expected to develop into an oil well.

This territory is at the north end of the gas production of the Calliham Field, and is about 2½ miles southeast of the old Crowther Pool, which was one of the first pools discovered in Southwest Texas, and which is not now on production.

About 7 miles south and a little west of the Calliham oil field and in McMullen County V. G. Schimmell, aiming for the Pettus sand, which it was expected would be picked up at about 1,500 feet, got gas in No. 1 Hale, 850 feet from the north line and 1,580 feet from the west line of Survey No. 63. It topped the sand at 370 feet, was drilled to 400 feet, and came in for about 10,000,000 feet of gas. The company late in June was starting another test.

Nueces County

John F. Camp and Stanolind Oil & Gas Co. found two gas sands in western Nueces County 6 miles northwest of the Agua Dulce Field. The No. 1 King, drilled on Stanolind Oil & Gas Co. lease 600 feet from the north and west lines of Section 23 of the Richard King farm lots subdivision, was completed in sand at 3,883-99 feet for an estimated 40,000,000 feet of gas with 1,300 pounds pressure on tubing and 1,100 pounds on casing on one-quarter inch choke. The No. 2, in the southeast corner of the same section, found gas in the same sand and also about the same volume in another sand at 4,010-24 feet. It was in this sand at the close of June and waiting on orders.

Duval County

Duval County has had the major attention in Southwest Texas most of the time for the first six months of the year. First Smith & Capps brought in the No. 1 Duval County Ranch Co., 1,097 feet from the northeast line and 2,318 feet from the northwest line of Survey No. 576. It was on acreage farmed out by The Texas Company. It was completed at 2,413 feet for around 40,000,000 feet of gas. The core taken before it was brought in was saturated with oil. It topped a sand first at 2,350 feet and took a saturated core down to 2,355 feet but when brought in after casing was set came in for gas. It was then deepened to 2,413 feet and completed again for gas. The same company then drilled No. 2 Duval County Ranch Co. a quarter of a mile northeast and brought it in at 2,395 feet gauging at the rate of 2,100 bbls. daily on three-fourths inch choke. On five-eighths inch choke it gauged 1,290 bbls. and on half inch choke 729 bbls. Humble Pipe Line Co. took the oil.

This test is the discovery oil well of the Sarnosa Pool and is 2 miles southwest of production in the south extension of the Government Wells Pool. There is some little confusion over the depth measurements of this and other wells in this field but they are approximately correct. Magnolia Petroleum Co. has offset this test on the southeast with an oil producer and Sun has offset the Magnolia on the southwest with an oil producer and some additional locations have been made in the area.

Three miles north of the Government Wells original pool Seacord & Putnam, following the geology that resulted in the discovery of the Government Wells original pool, drilled No. 1 Johnson, 150 feet from the south and west lines of the NW NW, Survey No. 44, and got gas in sand at 1,567-74 feet, where the well was completed. Production in the Government Wells Pool as in the south extension and in the Sarnosa Pool is all at about the same depth and is in the same sand. The production at 1,567-74 feet is in the Cole sand, not producing elsewhere in the Laredo district than in the Cole Field 25 miles south. Their objective had been the sand producing in the other Government Wells Field.

Suttle and others followed them in a few weeks by drilling No. 1 Bennett, 150 feet from the north and east lines of the southwest quarter of Survey 44, to the Government Wells sand and brought in a big oil well in sand at 2,311-13 feet under a 1-foot rock. Above the rock was sand carrying considerable gas and casing was set above that gas sand. The well came in a little disappointing at the start but soon started improving and finally was making at the rate of 2,800 bbls. daily on choke. It was completed June 1, and by the close of the month Magnolia Petroleum Co. had completed a north offset to it and H. H. Coffield had completed his No. 1 Wendt a half mile west, and Southwest Drilling Co. had completed its No. 1 Wendt one-half mile south of Coffield, thus materially extending the field.

The Coffield well came in for 245 bbls. a day on quarter inch choke. It got the oil under cap rock with gas above it as did the Suttle test. Southwest Drilling Co. did not find the cap rock but got production in the same sand. It was open only one hour after being brought in and made 35 bbls. in that hour on half inch choke.

Webb County

Webb County saw the opening of one new important pool. During the closing days of June Phillip Rosenberg completed No. 2 Laurel in approximately the center of Survey 270, about 3½ miles southwest of the Carolina-Texas Field, in sand at 2,240-44 feet. It started off making at the rate of about 350 bbls. of oil through tubing but settled back to around 150 bbls. when something happened. The tubing may have parted or split but the 150 bbls. was being made through both tubing and casing, equivalent to open flow. The oil is high gravity, 49.5° A.P.I., with 69 per cent gasoline content. The watershed between the Nueces and the Rio Grande running northwest and southeast lies between this well and the Carolina-Texas Field and the geology is such as to preclude their connecting up. The well was completed on June 22 and no further development had been started but the acreage around is largely in the hands of independent operators and some development is due to follow at once.

Starr County

Starr County found two new producing areas. No. 1 Goodrich, about 1½ miles northeast of the center of Rio Grande City, was started by R. E. Johnson, completed by Heard & Heard and those interested in the well which was "poor-boyed" down then incorporated as the Sioux Oil Co., so the test is carried under all three names. In sand at 1,368-82 feet it came in an oil well, started off at around 200 bbls. per day flowing. It was completed about the middle of April and during the rest of that month produced 1,000 bbls. of oil and during the month of May produced 700 bbls.

The Los Olmos shallow field discovered last year is about 8 miles northwest of this new production. Tests drilled 1,500 feet west and 2,500 feet south were dry. A test 2,500 feet north at the close of the month of June looked favorable but was not completed. The No. 1 Goodrich is 1,214 feet from the north line and 1,065

(Continued on Page 79)

Slowing Down in Operations in All Canadian Fields and Decline in Oil Production

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

Canada, in the first half of 1932, contributed its quota to the stabilization of the world petroleum industry by a marked reduction, close to 50 per cent, in crude production. This reduction has been almost entirely in the Alberta fields, where decreased wet gas flows and crude naphtha recoveries, together with gas conservation measures, contributed to reduce the immediate production of crude naphtha from the Turner Valley Field. This field is still the major factor in Canadian production.

Official figures available cover only the first four months of the year. The following comparative totals for all Canadian fields will indicate the trend of petroleum production:

Monthly Totals for All Canadian Fields

	—Bbls.—	
	1931	1932
January	179,711	96,912
February	155,651	90,841
March	160,358	97,484
April	153,705	84,444
Total	649,425	369,681

On the other hand, there has been, in the corresponding period, a slight increase in natural gas production. In the 1930-31 and the 1931-32 seasons, gas production has been affected by two factors, the extremely mild winters, and the slackening of industrial operations; and the fields could have produced a great deal more gas than was actually sold. As the comparative figures indicate, the past winter shows some slight improvement for the industry.

Natural Gas From All Canadian Fields
(In thousands of cubic feet)

	1931	1932
January	3,200,000	3,220,087
February	2,976,140	3,043,967
March	2,750,721	3,009,764
April	2,454,063	2,356,619
Total	11,380,924	11,627,433

Figures of the crude petroleum production for the various provinces during the four month's period of 1932 are as follows, in barrels:

Province—	Jan.	Feb.	Mar.	Apr.
Alberta	87,057	80,580	86,711	84,444
N. Brunswick	460	459	464	379
Ontario	9,395	9,802	10,309	10,762
Canada	96,912	90,841	97,484	95,585

In Alberta, production is from three fields, Turner Valley, producing crude naphtha and light crude oil; Red Coulee, producing a fairly light crude; and Wainwright, heavy asphaltic crude. Details for these areas are given as follows:

	Jan.	Feb.	Mar.	Apr.
Turner Valley*	78,891	74,685	80,675	78,849
Turner Valley†	3,180	2,260	2,102	1,859
Red Coulee†	3,722	3,335	3,607	3,115
Wainwright‡	264	300	327	621

*Naphtha. †Crude. ‡Heavy crude.

The totals are as given in the previous table for Alberta. The Ribstone Pool, in East Central Alberta, which delivered some heavy crude for fuel oil purposes in 1931, does not appear in the 1932 figures.

Turner Valley pipe line runs show a marked decrease in comparison with the first half of 1931. To make up the total production as given in the government returns, these pipe line runs are supplemented by direct sales at the wells, and the extent of these may be gauged by comparing the government totals with the recorded deliveries to the Imperial, Regal and Bell refineries in the following summary. Production is in barrels:

	1931	1932
January	156,658	68,893
February	132,267	67,789
March	128,975	71,533
April	114,217	65,641
May	118,614	65,709
June	113,429	.....
Total	764,160	.....

Development work generally throughout Canada in the past six months has been slack, even in comparison with last year.

Quebec Operations

A new feature is active development work in Quebec. Following extensive leasing carried on in recent years, several commercial tests have been started in the St. Lawrence Valley, but so far the results have been largely negative. The work under way this year was largely a continuance of work started late in 1931.

In Lanoraie Parish, a number of shallow tests have been drilled by A. E. Goyette, by Lanoraie Oil & Gas Syndicate, Ltd., and by Trinidad Mines, Gas & Oil, Ltd. Some gas was struck under sand and clay drifts at depths between 150 and 200 feet.

At St. Denis, County of St. Hyacinthe, the Hope Engineering Co. last year drilled No. 1 well in Lot 549, Range 3, which was abandoned at 2,500 feet. No. 2, located 50 feet further south, was this year carried to 4,107 feet. Two shots were tried, but failed to increase the gas flow to commercial proportions.

At St. Eulalie, Nicolet County, Cote Gas & Oil, Ltd., has a test reported standing at 700 feet. A test by Canadian Seaboard Oil & Gas, Ltd., in St. Gerard Parish, Yamaska County, is reported down more than 2,785 feet.

South Shore Oil Lands, Ltd., which late in 1931 abandoned its No. 1 test near St. Perpetue, Nicolet County, at around 3,200 feet, is drilling a second test a little north which at last reports was 740 feet down.

Most of these tests have encountered gas, but nothing in large quantities; and so far there have been no reports of important oil showings. Drilling will probably be continued in the latter half of the year.

Ontario Development Work

The most interesting results in Ontario so far in 1932 have been in Lambton County. Here, Fairbanks Oil & Gas Lease, Ltd., got a small gas production in No. 1 well. It then cleaned out and shot the old Fairbanks gusher near Oil Springs, bringing back a production reported at 6,500,000 feet a day. A third test is near completion. In the Dawn Field, further south, Union Gas Co.'s No. 61, Lot 23, Concession 2, Dawn Township, instead of gas got a small pumping production, about 25 bbls. of crude oil, indicating oil possibilities at the west end of the field. Union's No. 62 is drilling. Still further west, in Sombra Township, Dawn Oil & Gas Co.'s No. 1, Lot 25, Concession 9, finished dry at 2,150 feet; but a second test is to be drilled.

To the east, a wildcat test by Michigan Pacific Oil & Gas Co., in Lot 10, Concession 12, Brooke Township, finished dry at 2,637 feet. In Euphemia Township, Lambton Oil & Gas Syndicate, a local concern, got a shallow crude production in No. 1 well in Lot 28, Concession 9; but three close-in tests by the

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same company and two by the Vogel Syndicate failed to extend the producing area.

In Kent County, the results of recent drilling have been less important. Early in the year Olga Oil & Gas Co. finished its No. 5 test in Raleigh Township as a small gasser; and has done no further work in this area. Union Gas Co.'s No. 20 D'Clute was drilled north of the proven D'Clute Field in Lot 21, Concession 10, Raleigh Township, and finished as a 100,000-foot gasser; No. 21 is drilling. In the old Tilbury Field, further west, Southern Ontario Gas Co. has so far done no drilling. Two tests, put down by Ralph Dawson in Lot 13, Concession 15, Tilbury East, got gas production in the Tilbury sand, one having a shot production of 400,000 feet. A test by Robert Smith of Windsor in Gora A, Romney Township, finished a small gasser; while a shallow well drilled by Luke Smith in Lot 1, Concession A, Raleigh Township, is reported to have a small oil production.

In Essex County, Pelee Oil & Gas Co. of Leamington has started its No. 1 test on Pelee Island. This area at one time had a commercial oil production.

Further east, drilling operations have been carried on by the Continental Oil & Gas Corp. in Haldimand County, developing some gas production. Near Caledonia, White Eagle Syndicate, organized by Petrolia and Sarnia men, is drilling a series of tests, two having already proven productive. In the Norfolk Field, Acme Gas & Oil Co. of Toronto is doing some further drilling in the gas field at Mabee's Corners.

Manitoba Gas Test

Drilling operations in Manitoba have been limited to Commonwealth Petroleums' No. 2 test for gas near Manitou, which is down 1,917 feet.

Operations in Alberta

Operations in Turner Valley, Alberta, have been affected by government conservation measures. The production is largely crude naphtha, recovered by separators from the wet gas. Some years ago the quantity of gas developed from the Madison limestone reached a point where, after the naphtha was extracted, the residual gas had to be burned to get rid of it. After numerous hearings and conferences in 1931, having as their objective the restriction of this waste of gas, the Alberta government this year appointed a Turner Valley Gas Conservation Board with authority to restrict and prorate the flow of the field in order to conserve the gas.

The board in May issued an order reducing the normal gas flow, about 400,000,000 to 500,000,000 feet, to less than 200,000,000 feet. This order was challenged in the courts with the result that the trial judge sustained the legislation. An appeal has been taken from this decision, but in the meantime the board is proceeding to enforce its conservation measures.

A regulation of the Alberta government last December prohibited the drilling of any new wells in the Turner Valley area to the Madison limestone, which automatically prevented any new deep drilling. Operations in the first half of 1932 have, consequently, been limited to the completion of unfinished tests.

Turner Valley Operations

Where, at one time, approximately 50 outfits were working simultaneously, the number of active tests in the Turner Valley Field has dwindled to less than a dozen, with some of these only intermittently active.

The year opened with the completion, in the far south end of the field, of Sterling Pacific Oil Co.'s No. 2, in Section 33-18-2w5. This well had a reputed open flow of 20,000,000 feet, with a large crude naphtha recovery. It was the last test of the Imperial program; and with its completion Imperial Oil, Ltd., discontinued drilling operations in the Turner Valley for the time being.

The only large crude naphtha producer was Hylo Syndicate's No. 1, Lot 12, Section 4-19-2w5. This test, started originally by Hylo Oils, Ltd., was taken over by a Calgary syndicate. It finished late in June at 5,670 feet with a wet gas flow of 11,500,000 feet a day and potential crude naphtha recovery of around 300 bbls.

These two wells represent the only large new crude naphtha producers completed in the six months. Wellington Oil & Gas Co.'s No. 1, LSD 1, Section 20-19-2w5, was, however, deepened to get a largely increased flow.

Crude Oil at Depth

The field has, however, witnessed two interesting new developments. In the south end, Miracle Oils' No. 3, LSD 11, Section 4-19-2w5, after failing to get the usual wet gas flow in the Madison horizon, at 6,150 feet encountered high grade crude oil production, starting at 15 bbls. a day, having since increased.

In the Central Turner Valley, McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, has an interesting deep test under way. This well, which previously had secured wet gas from two distinct horizons in the Madison lime, has since drilled below that horizon into the Banff shales, getting a 5-bbl. show of crude in the Banff at 5,560 feet. It is now drilling at 6,418 feet, apparently in or near the Devonian lime, and is, geologically, the deepest test ever drilled in the Turner Valley. The results in these tests, though small, lend some support to the theory that a reservoir of heavier crude may underlie the naphtha-producing field.

Crude Showings in the South

Late in 1931, crude oil showings were reported in the Madison limestone in three distinct tests in the border area. The tests were strung in a southeast-northwest line over a distance of 50 miles or more, extending from a point southeast of Lethbridge and close to the international boundary. Of these tests, Parco Oil Co.'s No. 1, on the Twin River structure, LSD 16, Section 34-1-20w4, got 15 bbls. a day from the top of the Madison at 3,890 feet. Later tests showed 5 bbls., and the well is now rated noncommercial, but is regarded as a hopeful indication of production in adjacent Alberta and Montana territory. A second test may be drilled.

To the northwest, Texas-Imperial's No. 1, LSD 14, Section 22-8-22w4, got its show in the same horizon at 4,551 feet. The show was noncommercial, and the well was abandoned, with no further drilling in prospect.

Still further to the northwest, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, got a good show of crude in the top of the Madison at 4,920 feet; and is standing cemented at 4,800 feet, waiting to sidetrack lost tools. In addition to its still untested deep production, this well has what looks like a small commercial production in the Benton shales.

Further east along the border, Mayland Southern's No. 1, LSD 13, Section 4-1-9w4, finished in water at 3,000 feet after deepening for oil. Gas in large quantities was reported in three upper horizons.

East Central Alberta

Drilling in East Central Alberta has been limited to two tests for gas by Northwestern Utilities, Ltd., in the Viking Field, and two in the Kinsella area. The first of the Viking tests got a gas flow of 11,000,000 feet a day.

Athabaska Test

In the Athabaska district, Athadome Oils, Ltd., of Toronto has under way the first of a series of tests to be drilled this summer. At 1,552 feet the test had encountered some shows of oil and gas, and was to be carried deeper.

Fort Norman Field

To supply fuel oil and gasoline to the new mining area at Great Bear Lake, Imperial Oil, Ltd., is reopening its far northern wells in the Fort Norman Field on the Mackenzie. Gasoline will be refined on the ground, and crude produced for fuel oil, but no new drilling is expected in the immediate future.

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With West Texas Production Steadily Declining Wildcatters Began Exploratory Drilling

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

The year 1931 was a dull one for West Texas, in all divisions of the oil industry, but the first six months of 1932 have shown a still greater dullness, although in the last two months of this period activities have picked up considerably, mostly in wildcatting, with a few drilling wells interspersed among the several producing areas.

The Yates Field, which had not had a well drilled in it for many months, saw the completion of a northeast edge well by the Gulf Production Co. in June. The potential production of the field and the daily allowable is such that the field may go many more months without another test, except the offset to the above well which will be drilled by the Simms Oil Co. on its lease.

Loving and Ward Counties were the two most active areas in the district during the first six months' period, several wells having been drilled in the Wheat Field in the former county, and the Grand Falls area in the southern part of the latter county having received the majority of tests in that county. One wildcat well was completed for a small producer in the western part of Ward County, and the O'Brien area in the northern part of the county saw the drilling and completion of several wells.

At the close of the half year the district's activities have been revived, with wildcats going down in many scattered areas, including Borden, Gaines, Ector, Brewster, Crockett, Irion, Glasscock and Presidio Counties. Many other counties have tests shut down at various depths, operators and companies starting these tests then not carrying them on to completion for various reasons.

Crockett County's Revival

Crockett County received the greatest lease and royalty play of any of the West Texas counties during the past few months. This was started by the report that a deep Ordovician test was to be drilled in Block UV, G.C.&S.F. Survey, southeast of the World Pool. Such a test is now drilling. Stanolind Oil & Gas Co., Mid-Kansas Oil & Gas Co., Shell Petroleum Corp., Sun Oil Co. and others are holders of acreage in this 4,000-acre unitized block. The test is in Section 67.

The Texas Company is drilling a test in southwestern Crockett County in Section 36½, I.&G.N. Survey, the first in this part of the country in many months.

Seeking Ordivician Deep Pay

Two interesting deep tests are drilling in Irion County, but so far have encountered no showings of oil or gas of importance. Stanolind Oil & Gas Co.'s No. 1 Williams in Section 1,196, T.T.R.R. Survey, one of the deep tests, has been shut down for the past three months waiting for new and repaired machinery, a fire originating on the derrick floor having wrecked the machinery and caused the shutdown. Total depth of the hole is 7,420 feet. Plymouth Oil Co.'s No. 1 Suggs in Section 3,081, Block 28, H.&T.C. Survey, the other interesting deep test in this county, has been temporarily stalled by a fishing job at 7,543 feet. Both tests are seeking the Ordovician pay found in the Big Lake Field in Reagan County, the adjoining county to the west.

Much interest has been lost in the two deep tests drilling in Schleicher County on account of long delays caused by fishing jobs and shutdowns. The Eastland Oil Co. is drilling one of these tests on the Joe Tisdale farm in Section 29, Block M, G.H.&S.A. Survey, and Wesner and others are drilling the other in Section 77, Block LL, T.C. Survey. The former is fishing at 5,410 feet and the latter at 5,580 feet.

One of the far western counties of the district, Presidio County, is now receiving its first test in over a year and a half. James F. Sadler of Los Angeles, Calif., is drilling a 3,500-foot test in Section 15, Block 351, G.C.&S.F. Survey, 3 miles northeast of the town of Presidio.

Brewster County, another isolated county in the district, is also receiving a test. C. M. Joiner of Dallas is drilling on a large block which he holds 8 miles southeast of Alpine. The test is in Section 31, Block 352, W. J. Mitchell Survey.

Duster on a Unitized Block

A unitized test was recently completed as dry in Glasscock County, Section 47, Block 36, Township 3s, T.&P. Survey. The Penn Oil Co., California Co., Humble Oil & Refining Co. and Honolula Oil Co. pooled acreage in this area, 18 miles southwest of the nearest production, and drilled to 3,810 feet before giving up the test as a "duster."

The Penn Oil Co. abandoned its No. 1 Slaughter wildcat in Labour 80, League 129, Carson County School Lands in Cochran County, during the fore part of the year. The hole was bottomed at 5,000 feet, a slight showing of oil logged at 4,862 feet failing to increase and make a commercial producer out of the test. A former test drilled in the area by the Continental Oil Co. was also dry, but had showings of sufficient importance to merit the drilling of this second test by the Penn Oil Co.

Runnels County, on the east side of the West Texas district, which has a little production in the McMillan Pool, several miles north of Ballinger, and which has long been dormant in regard to drilling activities, may add another producer to the small shallow field when the Blue Bonnett Petroleum Co.'s No. 1 McMillan is completed. This test is located 1,500 feet north of the only producer in the field, Section 22, N. Travis Survey. Oil from the pool is shipped out from this field by a small pipe line connecting to the Santa Fe Railroad east of Ballinger. The Magnolia Petroleum Co. owns the lone producer.

McElreath & Suggett, Shire & Davidson and others are drilling an important test in Section 397, Block G, Gaines County, and considerable acreage has changed hands in the vicinity of the test since it was first announced, several major companies purchasing protection. A

WEST TEXAS

Daily Average and Monthly Production First Six Months of 1932

Field and County—	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
OGDEN, ANDREWS:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
CHURCH FIELDS AND McELROY, CRANE:							
Daily average	15,500	15,674	16,296	17,524	17,862	17,531	
Month	480,500	454,546	505,176	525,720	553,772	525,930	3,045,594
SAND HILLS, CRANE:							
Daily average	26	28	36	36	38	34	
Month	806	812	1,116	1,080	1,178	1,020	6,012
WADDELL, CRANE:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
WORLD, CROCKETT:							
Daily average	970	962	1,012	1,086	1,105	1,208	
Month	30,070	27,898	31,372	32,580	34,255	36,240	192,415
PENN, ECTOR:							
Daily average	6,091	5,411	5,494	4,426	3,607	4,028	
Month	188,821	156,919	170,314	132,780	111,817	120,840	881,491
COWDEN, ECTOR (NORTH):							
Daily average	75	54	58	60	45	40	
Month	2,325	1,566	1,798	1,800	1,495	1,200	10,984
SETTLES-ROBERTS AND CHALK, HOWARD-GLASSCOCK:							
Daily average	24,770	22,114	23,233	22,828	21,037	16,695	
Month	767,870	641,306	720,223	684,840	652,147	500,850	3,967,236
STEPHENS, FISHER:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
BOREN, GARZA:							
Daily average	22	15	.....	.....	.....	.....	
Month	682	435	.....	.....	.....	.....	1,117
TANKERSLEY, IRION:							
Daily average	45	25	36	32	38	30	
Month	1,395	725	1,116	960	1,178	900	6,274
WHEAT, LOVING:							
Daily average	3,467	2,987	2,927	2,814	3,084	3,190	
Month	107,477	86,623	90,737	84,420	95,604	95,700	560,561
WESTBROOK, MITCHELL:							
Daily average	1,682	1,487	1,594	1,671	1,654	1,631	
Month	52,142	43,123	49,414	50,130	51,274	48,930	295,013
YATES, PECOS:							
Daily average	63,349	56,537	57,177	64,121	64,976	65,818	
Month	1,963,819	1,639,573	1,772,487	1,923,630	2,014,256	1,974,540	11,288,305
TAYLOR-LINK-UNIVERSITY, PECOS:							
Daily average	1,028	916	890	875	918	898	
Month	31,868	26,564	27,590	26,250	28,458	26,940	167,670
MASTERSON, PECOS:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
PECOS VALLEY, PECOS:							
Daily average	252	170	208	270	397	406	
Month	7,812	4,930	6,448	8,100	12,307	12,180	51,777
BIG LAKE, REAGAN:							
Daily average	26,131	27,892	29,430	28,030	24,500	24,300	
Month	810,061	808,868	912,330	840,900	759,500	729,000	4,860,659
McCAMEY, CRANE-UPTON:							
Daily average	4,516	4,169	4,300	4,407	4,637	4,737	
Month	139,996	120,901	133,300	132,210	143,747	142,110	812,264
O'BRIEN, WARD:							
Daily average	2,739	2,756	2,711	3,184	3,162	3,208	
Month	84,909	79,924	84,041	95,520	98,022	96,240	538,656
SHIPLEY-BENNETT, WARD:							
Daily average	1,069	1,213	1,245	1,251	1,512	1,717	
Month	33,139	35,177	38,595	37,530	46,872	51,510	242,823
HENDRICK AND LECK, WINKLER:							
Daily average	33,665	28,564	30,415	31,100	31,551	30,907	
Month	1,043,615	828,356	942,896	933,000	978,081	927,210	5,653,158
NORTH WINKLER, WINKLER:							
Daily average	1,188	1,131	1,264	1,335	1,304	1,251	
Month	36,828	32,799	39,184	40,050	40,424	37,530	226,815
DUNNIGAN, TAYLOR:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
IRA, SCURRY:							
Daily average	.....	.....	.....	.....	.....	.....	
Month	.....	.....	.....	.....	.....	.....	.....
Daily average	186,585	172,105	178,327	185,050	181,427	177,629	180,263
Total first six months 1932	5,784,135	4,991,045	5,528,137	5,551,500	5,624,237	5,328,870	32,807,924
Total first six months 1931	6,817,675	6,813,660	7,291,190	7,062,640	6,404,972	6,300,510	40,690,647
Total first six months 1930	10,608,883	9,574,215	10,412,647	9,436,801	9,661,721	9,130,220	58,824,487
Total first six months 1929	17,380,341	9,966,066	11,609,104	10,599,784	10,990,292	10,987,539	65,533,126
Total first six months 1928	8,521,701	9,036,190	10,380,877	11,149,642	9,873,668	8,947,700	58,209,778
Total first six months 1927	2,126,352	1,857,800	2,331,510	2,752,080	3,514,935	3,333,150	15,915,827

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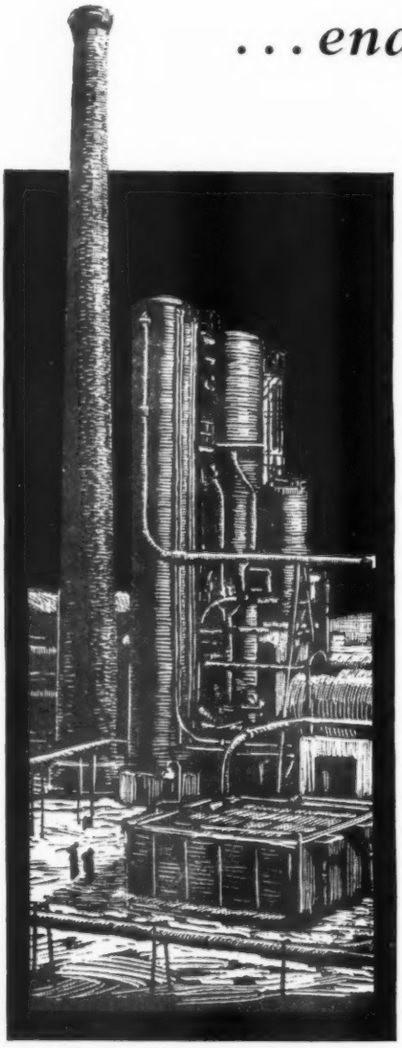

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rotary rig is being moved in to drill to the big lime which is expected around 4,200 feet.

One New Pool Opened

The only new pool opener in the district during the first six months was brought in from the same pay formation as found in the Wheat Pool, Loving County. Shipley, Byrd and others' No. 1 Monroe in Section 3, Block 1, W.&N.W. Survey, in the extreme western part of Ward County, was a surprise discovery when it topped the Delaware pay formation at 4,663 feet and filled the hole with 33 gravity oil, a lower gravity oil than found in the Wheat Pool, 13 miles to the northwest in Loving County. The hole was finally bottomed at 4,673 feet and the initial gauge showed the well good for around 40 bbls. per day.

Due to the depth of the well, its remote location and small potential, very little interest was taken in the area by either majors or independents, although D. H. Byrd of Dallas purchased an interest in the well and block and is drilling a second test in the area. The owners obtained pipe line connections from the Skelly Oil Co. which has a line running near the well to Pecos City from the Winkler County Field. The well is not expected to open up much of a pool in the area, and as already proven, other drilling will undoubtedly be slow in the vicinity of the well. The pool is expected to be somewhat similar to the Wheat Field in Loving County, in as much as it is producing from similar pay, and the wells are relatively small producers.

Ward County Most Active

Ward County has been the most active county in West Texas during the past six months, the Grand Falls area in the southern part of the county receiving the majority of the activities, although the O'Brien Pool, held mostly by the Gulf Production Co., has been the scene of steady drilling, one or two rigs running practically all the time.

The Eastland Oil Co. brought in the largest well of southern Ward County in May on its Weiss lease in Section 4, Block 34, H.&T.C. Survey. It topped the pay at 2,349 feet, and logged an increase at 2,358 feet, flowing 352 bbls. in 17½ hours with tools in the hole, and standing at 2,365 feet. Offset tests were started immediately after this well showed up as such a heavy producer. Stanolind Oil & Gas Co.'s No. 1 Weiss led to the drilling of an extension of the Barker area, when it was completed as a 190-bbl. well at 2,415 feet in the fore part of February. It is located in Section 4, Block 34, and created a one-half mile extension, and led to the drilling of the Eastland Oil Co. producer.

At the present time there are 21 active operations in Ward County, or more than in any one county in the district, and will no doubt remain the most active area during the remainder of the year.

Sid Richardson drilled a test on the S. M. Halley ranch, in Section 25, Block B-12, southern Winkler County, between the Hendricks Pool on the north and the O'Brien Pool on the south over in Ward County, which for a time looked as if it would open up another pool for the county, or extend production. It topped a pay at 2,928 feet but failed to make a commercial producer, drilling into salt water at 3,047 feet and being abandoned at 3,061 feet.

Big Gasser in Ector County

The Weekly Oil Corp., Casteel and others drilled in an 18,000,000-foot gasser in their No. 1 Cowden in Section 33, Block 43, T.&P. Survey, Ector County, thus opening up another area to more exploitation, a second well now being prepared to drill in the vicinity of this first gasser, which is in wildcat territory. The first gas was struck at 3,795 feet, and an increase was logged at 3,798 feet. However, it drilled through the gas to 4,373 feet, then was plugged back to 4,323 feet where it was completed. Gas from this well will be used in drilling the second test nearby.

There are two wildcats now drilling in Ector county and two more are preparing to start up within the near future, bringing more activity to the county which has been becalmed since drilling in the Penn Pool subsided, and the Stanolind Oil & Gas Co. opened up the Cowden production in the northeastern part of the county, only to drill two wells, which have never been given an outlet. The company has held up development on its block, which covers several sections in the area.

Pipe line nominations in the Penn Pool have fallen off considerably since the pool was opened, taking another drop in January, from 6,300 to 4,661 bbls. The Humble Pipe Line Co., Cosden Oil Co., Gulf Pipe Line Co. and the Skelly Oil Co. running practically all of the oil from the pool. There has been no drilling in the pool the past six months.

In Andrews County

The Fuhrman Petroleum Co. drilled in another well on its block in Andrews County during the last two months, this well also proving a small one, and having some trouble with salt water which is coming in through a break in the 6⅝-inch casing. The well, the second for the company, and located three-quarters of a mile southeast of the first producer, or discovery well for the area, topped the pay at 4,254 feet, and was completed at a total depth of 4,541 feet. It is located in Section 24, Block A-43. It was shot with 390 quarts at 4,220-4,333 feet, and was estimated good for 400 bbls. per day, with 5,000,000 feet of gas. The two wells have no outlet, as is the case with the Deep Rock Pool, 8 miles to the north.

Deeper Pay in Toborg-Tippett Pool

The Shallow Toborg-Tippett Pool, a short distance northwest of the Yates Pool, eastern Pecos County, which produces from pay logged from 316 to 500 feet, now has a well producing from a deeper pay horizon, similar to the pay found in the Yates Pool. The Easter Oil Co. drilled in this well in April of this year, making a 65-bbl. well from pay topped at 1,200 feet. It logged increases in oil at 1,290-95 feet and one at 1,318 feet and was completed at a total depth of 1,330 feet, thereby opening up a deeper pay horizon for that area in which the Cardinal Oil Co. of San Angelo is the largest producer. The Shell Pipe Line Co. takes all of the production from this pool.

The Cardinal Oil Co. purchased a half interest in the Phillips Petroleum Co.'s OW block west of Fort Stockton in Pecos County the middle of May, and will operate the shallow pool which now has only two producers, making around 233 bbls. per day, flowing into tanks. The company is also constructing 11 miles of 2½-inch pipe line from the pool to a small loading rack on the Santa Fe Railroad at Fort Stockton from which place it will ship the oil to the Shell Petroleum Co.'s tank farm at McCamey to be taken over by that company. Other wells are to be drilled by the purchaser when conditions of the industry warrant such a procedure. Production in these wells is coming from pay logged around 1,400 feet. Gravity of the oil is only 22 degrees.

The Wheat Pool, Loving County, has been the second most active area in the district during the past six months. Several producers were completed within that time, and 11 wells were drilling at the close of the half year. Several slight extensions have been made in the pool, the largest being 1 mile to the southeast, but the well proving but a small one, estimated as good for around 15 bbls. per day at a total depth of 4,380 feet. This well is owned by Tennant and associates and is located on the Martin ranch, Section 66, Block 1, W.&N.W. Survey.

Wheat Pool's Third Outlet

The Wheat Pool, Loving County, now has another small outlet for some of its oil. The Mentone Refining Co. built a 1,000-bbl. skimming plant at Arno, near the Field, and is processing oil from wells connected to it. The Paso-Tex Pipe Line Co. and Rio Grande Oil Co. also run oil from the field.

Nine Ordovician Oil Wells

There are nine Ordovician producers in the Big Lake Field, Reagan County, and three more deep wells are being drilled at the present time. The Big Lake Oil Co. is drilling two of the three, and the Group No. 1 Oil Corp. and Continental Oil Co. the other. The field is curtailed to around 20,000 bbls. per day, the companies owning the deep wells running special casing and tubing, and using extra heavy fittings in order to hold down production and gas flow from the deep wells. Some of the wells have been so equipped as to allow production from the two deep pay formations to be produced separately, thereby preventing the sulphur oil and "sweet" oil from mixing as produced.

Hard Hit by Proration

The Howard-Glasscock County Pools have felt the pinch of proration, possibly more than the majority of pools in the district, the pools being cut to 18,000 bbls. per day in June, the cut in May curtailing the area from 26,000 to 22,000 bbls., and the latter cut being forced by pipe line and purchasing companies who nominated to take still less oil.

The Harding Pool, 6 miles west and south of Big Spring, Howard County, which was opened in May, 1927, by the Marland Oil Co. in its discovery well in Section 19, Block 33, Township 1s, T.&P. Survey, received its first outlet in June of this year when the Big Spring Pipe Line Co. connected to the two producers in the area, and started running the oil to the Howard County Refining Co.'s skimming plant at Big Spring. The discovery well topped the pay at 3,175 feet and was completed at a total depth of 3,228 feet. There was approximately 25,000 bbls. of oil in storage at the wells when the pipe line company connected to the wells.

At a meeting of Howard-Glasscock County operators and company representatives, at Fort Worth early in March, testimony was given that more than 50 per cent of the producers in the west end of the field were making water. A committee was appointed to study the situation, and devise some means, if possible, to either eliminate the water from the wells or check its encroachment and production.

Dry Holes in Western Crane

The Tubb area, western Crane County, which was opened over a year ago by the Gulf Production Co. and Cranfill & Reynolds, received a definite setback this year when the Southwest Oil Production Co. and Penn Oil Co.'s No. 1 Tubb in Section 3, Block B-27, 2 miles to the northwest of the discovery well, was abandoned as dry at a total depth of 4,510 feet. This made the third dry hole drilled in the area since the discovery, the two other holes being located to the south of the producer which was but a small well.

The vast East Texas Field has no doubt been harmful to West Texas, production being curtailed still further in the latter area, as companies elected to take more oil from East Texas, which is nearer to Gulf ports and refineries. Much oil has been run from storage in West Texas during the past six months, companies drawing on storage as they curtailed their nominations from the various pools in the district. The vast amount of potential production in the eastern part of the state has affected wildcatting during the past year, this potential also affecting drilling in the known producing pools in the Permian Basin. It will continue to have such an effect until the flush production is waning, and hundreds of the several thousand producers in the East Texas Field go on the beam, a sign of its steady recession.

WEST TEXAS
Summary of Wells Completed, by Counties, First Six Months, 1932

County—	Comp.	Prod.	Dry	Gas
Andrews	1	200	0	0
Borden	1	0	1	0
Crane	1	210	0	0
Crockett	1	0	0	1
Culberson	1	0	1	0
Ector	1	0	0	1
Fisher	4	615	1	0
Glasscock	3	589	2	0
Howard	8	2,271	1	0
Hudspeth	1	0	1	0
Irion	3	4	2	0
Loving	8	364	2	6
Pecos	23	1,258	11	0
Reeves	3	0	3	0
Runnels	1	0	1	0
Scurry	1	0	1	0
Tom Green	1	0	1	0
Upton	5	1,929	1	0
Ward	21	1,903	3	6
Winkler	2	0	2	0
Total	90	9,343	34	2

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	11	1,866	3	0
February	8	852	2	0
March	13	1,377	6	0
April	13	835	9	1
May	23	2,640	6	0
June	22	1,773	8	1
First 6 months 1932	90	9,343	34	2
First 6 months 1931	221	25,989	111	2
Difference	131	16,646	77	0

Thirteen Oil and Gas Pools Opened in Southwestern Texas

(Continued from Page 74)

feet from the west line of the Goodrich 1,063-acre tract in Tract 5, Porcion 81.

Nine miles west and a little north of the Los Olmos Field Frank Dawson completed the No. 1 R. E. Margo at 357 feet testing 200,000 feet of gas and moved 300 feet west and completed the No. 2 at the same depth for 300,000 feet of gas. The No. 1 Margo is 632 feet from the north line and 516 feet from the east line of Block 5, Share 3-B, Subdivision of Porcions 67 to 72 inclusive.

SOUTHWEST TEXAS
Completions by Counties for First Six Months 1932

County—	Comp.	Prod.	Dry	Gas
Aransas	1	0	1	0
Bastrop	7	0	7	0
Bee	30	5,625	7	3
Bexar	33	287	6	1
Blanco	3	0	3	0
Brooks	1	0	1	0
Caldwell	7	3,976	2	0
DeWitt	2	0	2	0
Duval	33	9,004	15	2
Frio	1	0	1	0
Goliad	2	0	3	1
Gonzales	3	0	3	0
Guadalupe	13	2,729	9	0
Hidalgo	3	0	3	0
Jim Wells	3	0	2	1
Jim Hogg	7	0	7	0
Karnes	1	6	1	0
Kerr	2	0	2	0
LaSalle	1	0	1	0
Lee	5	0	5	0
Live Oak	8	0	6	1
Maverick	3	0	3	0
McMullen	2	75	0	0
Medina	4	0	4	0
Milam	4	5	3	0
Nueces	12	1,235	6	4
San Patricio	2	0	1	1
Starr	54	753	28	2
Real	1	0	1	0
Refugio	3	600	2	9
Travis	3	0	4	0
Webb	18	675	12	1
Williamson	7	0	7	0
Wilson	1	0	1	0
Victoria	3	600	1	1
Zapata	85	7,481	28	6
Zavala	1	0	1	0
Total	369	33,045	189	24
First six months 1931	401	42,183	219	34
Difference	32	9,138	30	10

Completions by Months

	Comp.	Prod.	Dry	Gas
January	50	4,995	16	8
February	48	6,538	20	6
March	61	2,898	31	4
April	77	2,557	44	2
May	61	7,780	36	2
June	72	8,277	42	2
Total	369	33,045	189	24

DRILLING IN WEST AFRICA

A report on the economic conditions in Angola (Portuguese West Africa), issued by the British Department of Overseas Trade, refers to the Companhia de Petroleo de Angola oil concessions northwest of Angola where since 1919 the Sinclair interests have spent $11,000,000 in surveying and drilling, without finding anything more than traces of oil since 1921, when a little heavy oil was discovered. At the end of 1931 drilling operations were stopped, but the company still has an American surveyor in the country. British capital was interested in the Companhia Mineria de Mocambique, which held a concession farther south; but this concession was abandoned without carrying out any drilling.

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and

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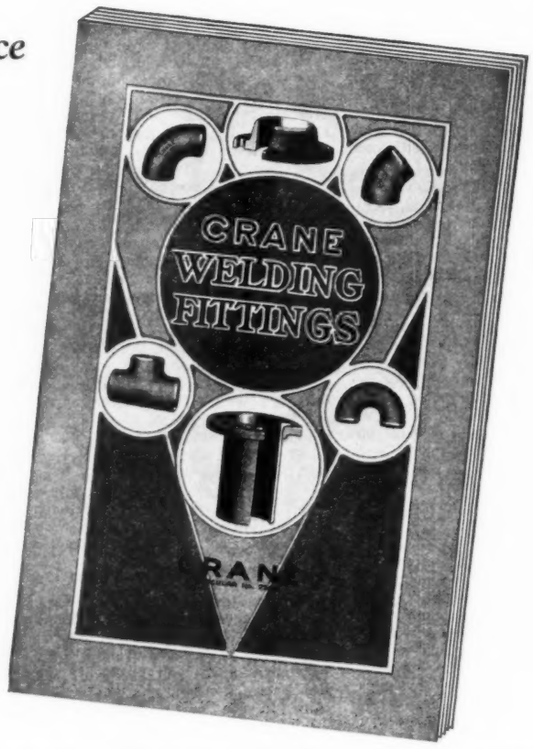

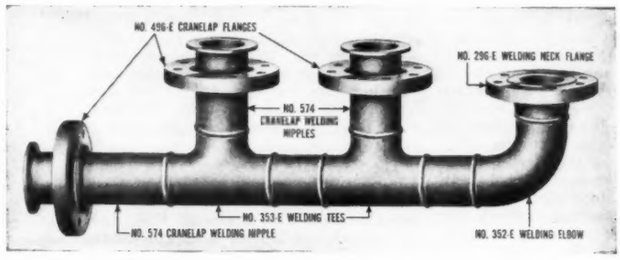

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These illustrations from the new Crane booklet on welding are from the comprehensive section on the application of the new welding materials.

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Open Only Unimportant Pools in North Central Texas and Texas Panhandle in First Half

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

The Ranger, Wichita Falls and Panhandle districts of Texas felt the effects of the great East Texas Field in the first half of this year, both as to its potential possibilities as well as its daily production. All activities were checked to a minimum, although the last two months showed a slight quickening of interest and drilling in various areas throughout the districts.

Wildcatting was almost at a standstill in the Ranger district, as well as field drilling, but in that district the majority of the pools have been practically drilled up. Only two new areas were opened to production in the district during the first six months, one in Coleman and one in Callahan County, but these were located near other pools.

In May, Ungren & Frazier brought in a small well from pay topped at 911 feet, 1,700 feet northwest of the nearest production, but at a lesser depth than the older production, in northern Callahan County. The well is on the Jackson ranch in Section 21, E.T.R.R. Survey, and made 72 bbls. when completed. The other production in the area is coming from a 1,300-foot sand. An offset was drilled to the Jackson test and missed the new shallow sand, and is drilling ahead in an effort to pick up the 1,300-foot pay. This new find is of small importance, apparently.

Frank Aldrich and the Herbert Oil Co. of Fort Worth drilled in a well on their Keeney lease in the E. N. Eubanks Survey, No. 270, Coleman County, in May, thereby extending production or opening up a separate pool in that county, but the well at the close of June had no outlet. Wittmer property trustees have just drilled in a southeast offset. The discovery well, which as yet has no outlet except by tank trucks, is estimated good for from 150 to 250 bbls. per day. No 24-hour gauge has been taken for it has been partially shut in flowing into tanks. Pay was topped at 1,810 feet and sand was drilled to 1,815 feet where it was shut down. Gravity of the oil is 38.6 degrees.

Wells which had been shut in for over a year in the shallow Burkett area, Coleman County, were given an outlet by the Humble Pipe Line Co. in May when it connected to 183 of them, all of which produced from the 500-foot pay, opened last year.

A. C. Walker opened a small producing area 2 miles south of Albany in Shackelford County in January. The well is located in Section 38, Blind Asylum lands. It made only 12 bbls. from a 700-foot sand, and opened a pool of little consequence.

The Strawn townsite gas pool has seen considerable drilling during the past several months, the Lone Star Gas Co. tying into the pool with an 8-inch gas carrier from its 18-inch main line south of the city. Only 4 miles of line were necessary to make this connection. The Texas Public Utilities Co. also laid a gas line from the townsite gassers, connecting with the Texas Electric Service Co.'s power plant on the Llano River near Eastland. This was an 8-inch line, 20 miles in length.

The Stanolind Pipe Line Co installed more equipment in its Ranger station to handle West Texas oil taken over from the Humble Pipe Line Co., and pumped through its main line from Ranger north to Whiting, Ind. The Stanolind company had been shipping Winkler County crude by tank car, and these pumping station additions and connections will save the company large freight tariffs.

The Cook Pool, Shackelford County, was given a lift during January when the Humble Pipe Line Co. stepped up its per-well runs from 4 to 10 bbls. per day. The Continental Oil Co., Roeser & Pendleton and Humble Oil & Refining Co. are the producers in this pool.

In January the Prairie Oil & Gas Co. and Amerada Petroleum Corp. brought in a well from the Edgin sand on the Ritchie lease in the C.T.R.R. Survey, Abstract 140, Palo Pinto County, Wichita Falls district. The well topped the sand at 1,702 feet and drilled to 1,704 feet swabbing 65 bbls of oil in 12 hours. However, wells in that area are only allowed to produce 10 bbls. per day. The Sinclair-Prairie Pipe Line Co. is connected to the well. A south offset was drilled to this small discovery, but it proved a dry hole.

Young County Most Active

Young County has been one of the most active counties in the Wichita Falls district during the past six months, with several extension wells, and new pool openers having been completed, but stringent proration rules and small per well allowables held activities to a minimum, and prevented much activity which otherwise would undoubtedly have taken place. The district as a whole is suffering on account of small per-well allowables, and in June the Wichita Falls district's wells making more than the marginal allowance were cut to 7 per cent of the potential, a cut of 13 per cent. This order was issued to keep down the district's production to around 56,000 bbls. per day, and will no doubt cause considerable distress to small operators in the district. The marginal well allowance is 10 bbls. per well for wells producing at less than 2,000 feet; 20 bbls. for wells producing between 2,000 and 3,500 feet, and 40 bbls. for wells producing below 3,500 feet.

Knox brought in a new pool in January on his Manning lease in Lot 7, Abstract 1,232, T.&L. Survey, northwest of Graham in northern Young County. The Strawn sand was topped at 2,749 feet and the hole bottomed at 2,758 feet, flowing 319 bbls. in 12 hours through a 2-inch flow line. It is located 4 miles northeast of the Morrison Pool. Drilling in of this well started a new lease and royalty play in its vicinity, and resulted in the drilling of other tests on offset leases.

In Archer County

Many Canyon series tests have been drilled in Archer County during the past six months, the majority of them located in the Chalk Hill area, where 10 wells have been completed in this new pay horizon, extending the Canyon horizon for 6,000 feet from the northwest to the southeast, the Falls Refining Co. completing the last Canyon test in the area for a producer, extending the pay another 2,100 feet the middle of June. It is located in Section 119, A.T.N.C.L. Survey.

The 10 Canyon producers have a daily potential of 3,240 bbls. but are allowed to produce only 460 bbls. per day as per proration orders in the district. Many other tests are now being drilled in the county seeking the Canyon series horizon, and during the next few months this will no doubt be the principal activity in the county. The Chalk Hill area is expected to be extended still farther by other Canyon wells. When some of the wells fail to make producers in this horizon, they are drilled deeper in an effort to pick up production in the Strawn sand below 3,600 feet.

Deep Oil Development Co. and Lindsay Drilling Co.'s No. 1 Lease 5-A Wilson, completed in April in the Chalk Hill Pool, Archer County, for an initial production of 700 bbls. per day, was an interesting

NORTH TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
BURKBURNETT:							
Daily average	4,942	5,912	5,763	5,375	5,696	5,815	
Month	153,202	171,448	178,653	161,250	176,576	174,450	1,015,579
ELECTRA:							
Daily average	7,656	7,916	7,666	7,878	8,163	8,484	
Month	237,336	229,564	237,646	236,340	253,053	254,520	1,448,459
IOWA PARK, K.M.A.:							
Daily average	2,993	2,810	2,803	2,776	2,771	2,790	
Month	92,783	81,490	86,893	83,280	85,901	83,700	514,047
ARCHER COUNTY:							
Daily average	10,295	10,982	10,568	10,767	10,812	11,306	
Month	319,145	318,478	327,608	323,010	335,172	339,180	1,962,593
CLAY COUNTY:							
Daily average	467	494	478	479	473	469	
Month	14,477	14,326	14,818	14,370	14,663	14,070	86,724
WILBARGER COUNTY:							
Daily average	9,796	9,657	9,564	9,616	9,733	9,411	
Month	303,676	280,053	296,484	288,480	301,723	282,330	1,752,746
MONTAGUE COUNTY:							
Daily average	4,016	4,302	4,038	4,019	3,989	4,007	
Month	124,496	124,758	125,178	120,570	123,659	120,210	738,871
YOUNG COUNTY:							
Daily average	8,999	9,566	9,499	9,521	9,733	9,726	
Month	278,969	277,414	294,469	285,630	301,723	291,780	1,729,985
BAYLOR COUNTY:							
Daily average	463	481	455	446	443	439	
Month	14,353	13,949	14,105	13,380	13,733	13,170	82,690
COOKE COUNTY:							
Daily average	1,504	1,531	1,522	1,510	1,504	1,514	
Month	46,624	44,399	47,182	45,300	46,624	45,420	275,549
FOARD COUNTY:							
Daily average	71	65	57	59	58	57	
Month	2,201	1,885	1,767	1,770	1,798	1,710	11,131
Daily average	51,202	53,716	52,413	52,446	53,375	54,018	52,848
Total first six months 1932	1,587,262	1,557,764	1,624,803	1,573,380	1,654,625	1,620,540	9,618,374
Total first six months 1931	1,997,361	1,680,504	1,876,306	1,790,400	1,809,873	1,771,680	10,926,124
Total first six months 1930	2,768,393	2,563,792	2,860,587	3,053,580	3,153,351	3,043,020	17,442,723
Total first six months 1929	2,794,619	2,412,788	2,760,705	2,729,250	2,793,286	2,759,550	16,250,198
Total first six months 1928	2,441,002	2,247,790	2,483,100	2,465,970	2,600,559	2,687,207	14,925,628

TEXAS PANHANDLE

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
CARSON COUNTY:							
Daily average	5,296	4,647	4,530	4,937	5,250	5,417	
Month	164,176	134,763	140,430	148,110	162,750	162,510	912,739
HUTCHINSON COUNTY:							
Daily average	12,176	12,114	12,259	12,646	13,487	13,114	
Month	377,456	351,306	380,029	379,380	418,097	393,420	2,299,688
WHEELER COUNTY:							
Daily average	384	371	339	487	425	403	
Month	11,904	10,759	10,509	14,610	13,175	12,090	73,047
GRAY COUNTY:							
Daily average	30,531	29,097	29,080	31,487	31,213	33,147	
Month	946,461	843,813	901,480	944,610	967,603	994,410	5,598,377
MOORE COUNTY:							
Daily average	1,197	1,787	938	1,238	1,412	1,377	
Month	37,107	51,823	29,078	37,140	43,772	41,310	240,230
Daily average	49,584	48,016	47,146	50,795	51,787	53,458	50,132
Total first six months 1932	1,537,104	1,392,464	1,461,526	1,523,850	1,605,397	1,603,740	9,124,081
Total first six months 1931	1,754,042	1,499,736	1,593,152	1,622,220	1,858,202	1,764,960	10,092,312
Total first six months 1930	2,655,398	2,467,080	2,750,971	2,835,960	3,297,315	3,156,941	17,163,665
Total first six months 1929	1,882,878	1,582,196	1,845,213	1,834,980	2,086,579	2,623,680	11,855,526
Total first six months 1928	2,408,359	2,287,607	2,253,173	2,044,020	2,115,409	1,965,484	13,074,052

well in as much as it passed up production in the Canyon series, was drilled to 5,750 feet, passing up the oil shows around 3,640 feet, and was later plugged back to 3,638 feet completing it at that depth, the first deep producer in the Chalk Hill area. It had oil shows at 2,225-26 feet, 2,226-40 feet, 2,247-49 feet, 3,480-85 feet and 3,614-38 feet. It also opens up another pay horizon in the area, and paved the way for more drilling to test this sand.

Perkins and Cullum's No. 1 Abercrombie in Block 157, John Harris subdivision, wildcat southwest of Archer City, Archer County, opened up a separate pool, or extended production in that area in April when the well was brought in from pay topped at 1,190-95 feet. A south offset was soon drilled in making around 150 bbls. per day. The discovery well is 1 mile northwest of three wells which are making a little production, and 5 miles from important production. Operators took an active interest in the acreage near this well after it was brought in, but The Texas Company was the only major company that purchased any acreage.

New Pay on Holliday Area

The Fain & McGaha Oil Co. opened up a small pool in Archer County in April on its fee lands in Block 3, League 3, 9 miles from Wichita Falls. Sand was topped at 1,789 feet and the well completed for 124 bbls., pumping. Gravity of the oil tested 40 degrees. The discovery is located 2 miles west of old production in the J. L. Jackson lands, and opened up a new pay horizon in the Holliday area. Several tests have been drilled around the discovery, one of them proving a dry hole, and the others but small wells. The three wells in the pool are now on the pump.

The Lamont Drilling Co. extended production 1 mile in southeastern Archer County on its C. E. Pruett lease. Oil sand was logged at 689-701 feet, and during the second 24 hours it was on production made 312 bbls. The Pure Oil Pipe Line Co. connected to the well.

The Stanolind Pipe Line Co. withdrew as a purchaser in the Thalia area, Foard County, in June, leaving six wells, producing 67 bbls. per day, without connections.

The Gulf Pipe Line Co. took over the Texas Pipe Line Co.'s gathering system and lines in the Chalk Hill area in May, and entered as a purchaser, taking the production from the Canyon wells as well as other wells in the field.

Small Refinery Built

A 500-bbl. refinery was built at Pilot Point, 4 miles from the small shallow pool in Cooke County, and will process crude from that pool. The Pilot Point Refining Co. was organized to construct and operate the plant. A 4-inch line formerly constructed by the Texas Pacific Coal & Oil Co. from the pool to a loading rack at Pilot Point, will transport crude from the pool to the refinery. Gravity of the crude in this pool is 24 degrees.

The Octane Oil & Refining Co. constructed a 1,500-bbl. refinery at Chautauqua Switch near Baird, in Callahan County, during the year, and is processing oil from the producing area around Putnam.

The Jacobs Oil & Gas Co. constructed a 500-bbl. refinery near its production near Olney in Young County, and is drilling more wells in the area, with intentions of refining its own crude.

Several refiners at Wichita Falls have considered the construction of 18 miles of 3-inch gasoline line from that point to Devol, Okla., in order to transport gasoline to the latter point and save on freight tariff which is considerable higher from the former point than from Devol. A recent request that the differential be reduced 1 cent per 100 pounds was refused by the railroads, consequently the refiners have been figuring on the gasoline line.

An interesting wildcat is preparing to drill on the M. E. Williams farm in the Solomon Nix Survey, Abstract 908, in the southern part of Grayson County, approximately 6 miles northeast of Van Alystine. The test is located on a 28,000-acre block, and will probably be drilled to 7,000 feet.

NORTH CENTRAL TEXAS
Summary of Wells Completed, by Counties, First Six Months, 1932

County—	Comp.	Prod.	Dry	Gas
Archer	120	6,089	54	1
Baylor	1	212	0	0
Brown	17	177	8	4
Callahan	19	137	15	0
Clay	1	0	1	0
Coleman	9	725	4	0
Comanche	1	0	1	0
Cooke	1	20	0	0
Eastland	8	140	4	2
Erath	1	0	0	1
Foard	1	0	1	0
Fannin	1	0	1	0
Grayson	3	0	3	0
Jack	7	0	7	0
Montague	5	737	1	0
McCulloch	1	0	1	0
Palo Pinto	21	170	8	11
Parker	1	0	1	0
Shackelford	33	290	10	8
Somervell	1	0	1	0
Stephens	3	0	3	0
Throckmorton	8	20	6	0
Taylor	1	0	1	0
Wichita	54	1,148	25	0
Wise	1	0	1	0
Wilbarger	7	323	2	0
Young	192	5,018	125	0
Total	518	15,296	284	27

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	43	1,596	24	0
February	67	2,036	39	2
March	57	984	29	8
April	101	2,728	62	5
May	123	3,734	52	10
June	127	4,128	78	2
First 6 months 1932	518	15,296	284	27
First 6 months 1931	729	23,869	473	54
Difference	211	8,654	189	27

Panhandle District

There were 65 completions in the Panhandle district during the past six months. As long as East Texas is capable of producing the large amount of flush production now attributed to it, and as long as activities are rushing ahead in that district the Panhandle district will remain practically dormant.

Several of the companies have been drilling old oil wells deeper in various areas in the district, principally in Gray County, some of the deepening operations having had considerable success and increasing production, whereas in others there were no benefits derived by the added work on the wells. Companies will no doubt continue to deepen old wells in order to increase production, if possible, and keep it steady, whereas pool drilling and wildcatting is held to a minimum.

There were no new pools opened in the district during the first six months, and the only extensions of interest were in Wheeler and Moore Counties. The Mid-Kansas Oil & Gas Co. drilled in its No. 1 L. H. Webb in Section 61, Block 25, H.&G.N. Survey in the middle of June, extending production one-half mile from eastern Gray County over into western Wheeler, which may result in a new drilling campaign in this area. The well topped a gas sand at 2,456 feet, and oil pay at 2,442-55 feet and what was considered as the pay horizon at 2,452 feet. It was bottomed at 2,505 feet and given a 120-quart shot from 2,458-95 feet, flowing 160 bbls. in 12 hours after the shot.

The Magnolia Petroleum Co.'s No. 1 A. Nield in the southeast corner of Section 361, Block 44, H.&T.C. Survey extended gas production in the Moore County producing area, but did not make much of a well itself, although it was shot in an effort to stimulate production. Sunset Oil Co.'s No. 1 Dore in Section 318, in the same block and survey as No. 1 Nield, also had possibilities of extending production but made only 10 bbls. per day on the pump at total depth of 3,651 feet and will probably be plugged. There is still more acreage in this area to be proven, and during the next few months other tests may bring in larger producers, putting the area in the major importance class.

An Important Test

One of the most important and most interesting tests ever drilled in the Panhandle district is preparing to start drilling in Section 40 in the west central part of Cottle County on what is known as the Narcisse structure. The Darby Petroleum Co. of Oklahoma, which obtained an interest in the large block from Merry Brothers and Perini, will drill the well, which is to be an Ordovician test to drill to 6,000 to 6,500 feet in an effort to pick up the deep pay found in the Big Lake Field, Reagan County, in West Texas. The location is approximately 10 miles west and 1 mile south of the town of Paducah, in the Stephens Survey.

Construction in the area has been at a standstill since the several large gas companies completed their trunk lines out of the district last year. Refinery, carbon black and gasoline plant construction has been nil, except for the changing of some of the plants, renewing old equipment or making repairs, or installing cracking units in a few of the plants. There will probably be no construction in the district during the remainder of the year, the operating companies retrenching and waiting for better prices and better outlook for their product from the district, and for better conditions in the industry.

TEXAS PANHANDLE
Summary of Completed Wells, by Counties, in First Six Months of 1932

County—	Comp.	Prod.	Dry	Gas
Carson	11	592	1	7
Cochran	1	0	1	0
Childress	1	0	1	0
Gray	37	12,029	2	3
Hutchinson	6	718	0	5
Moore	7	530	0	5
Potter	1	0	0	1
Wheeler	1	0	1	0
Total	65	13,869	6	16

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	14	1,504	6	6
February	6	1,525	2	1
March	7	570	1	3
April	9	3,094	0	1
May	9	915	1	2
June	20	6,261	2	3
First 6 months 1932	65	13,869	6	16

OIL FINDING BY SMELL

That the human sense of smell, if good, may be keen enough to indicate oil seepages appears probable from a dispatch by the Perth correspondent of the "Melbourne Age," who writes as follows:

A few weeks ago a station hand of the Boolardy Station, on the Murchison, accompanied by an aboriginal, was journeying across the run looking up some sheep. While traveling the abso suddenly stopped and exclaim, "Me smellum motor car." No signs of a motor car being visible, or even tracks of any motor vehicle, the station hand expressed incredulity, but the abo, persisting, picked up some rocks and handed them to his boss, with the wish that "he should smellum." This was done, and on reports sent to Perth, with samples, the chief government geologist and an assistant official have gone to the scene of the find to investigate. The rocks are of a limestone nature permeated with a greasy substance that certainly has a petroliferous smell, but the specimens seen so far are too small to base any opinion on. The official report is expected shortly.

CENTRAL TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
BROWN COUNTY:							
Daily average	2,542	2,629	2,716	2,673	2,860	2,811	
Month	78,802	76,241	84,196	80,190	88,660	84,330	492,419
CALLAHAN COUNTY:							
Daily average	1,216	1,156	1,200	1,192	1,212	1,283	
Month	37,696	33,524	37,200	35,760	37,572	38,490	220,242
COLEMAN COUNTY:							
Daily average	2,446	2,620	2,560	2,620	2,517	2,410	
Month	75,826	75,980	79,360	78,600	78,027	72,300	460,093
COMANCHE COUNTY:							
Daily average	67	73	72	71	69	71	
Month	2,077	2,117	2,232	2,130	2,139	2,130	12,825
EASTLAND COUNTY:							
Daily average	2,762	2,717	2,999	3,103	3,222	3,386	
Month	85,622	78,793	92,969	93,090	99,882	101,580	551,936
ERATH COUNTY:							
Daily average	149	146	159	154	151	155	
Month	4,619	4,234	4,929	4,620	4,681	4,650	27,733
JACK COUNTY:							
Daily average	1,664	1,727	1,457	1,610	1,588	1,612	
Month	51,584	50,083	45,167	48,300	49,228	48,360	292,722
JONES COUNTY:							
Daily average	1,083	1,035	1,132	1,077	1,063	1,054	
Month	33,573	30,015	35,092	32,310	32,953	31,620	195,563
PALO PINTO COUNTY:							
Daily average	315	299	287	376	360	376	
Month	9,765	8,671	8,897	11,280	11,160	11,280	61,053
RUNNELLS COUNTY:							
Daily average	49	58	53	55	52	55	
Month	1,519	1,682	1,643	1,650	1,612	1,650	9,756
SHACKELFORD COUNTY:							
Daily average	4,249	4,793	4,239	4,284	4,338	4,281	
Month	131,719	138,997	131,409	128,520	134,478	128,430	793,553
STEPHENS COUNTY:							
Daily average	3,662	3,820	3,903	3,690	3,847	3,849	
Month	113,522	110,780	120,993	110,700	119,257	115,470	690,722
THROCKMORTON COUNTY:							
Daily average	496	452	542	512	516	552	
Month	15,376	13,108	16,802	15,360	15,996	16,560	93,202
HASKELL COUNTY:							
Daily average	39	39	38	37	37	36	
Month	1,209	1,131	1,178	1,110	1,147	1,080	6,855
TAYLOR COUNTY:							
Daily average	39	38	131	117	119	117	
Month	1,209	1,102	4,061	3,510	3,689	3,510	17,081
Daily average	20,778	21,602	21,488	21,571	21,951	22,048	21,570
Total first six months 1932	644,118	626,458	666,128	647,130	680,481	661,440	5,925,755
Total first six months 1931	653,356	628,516	669,600	693,960	741,768	716,370	4,103,570
Total first six months 1930	1,536,689	1,197,784	1,255,702	1,220,510	1,218,176	1,172,640	7,399,501
Total first six months 1929	1,574,423	1,368,504	1,515,249	1,451,880	1,539,057	1,471,350	8,920,263
Total first six months 1928	1,402,754	1,381,096	1,465,029	1,422,150	1,477,119	1,473,111	8,621,259

From "upper-district," Pennsylvania to Calles, Mexico

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When you make up your next bid lists, write to Cities Service, 60 Wall Street, New York, or the nearest subsidiary listed below.

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CITIES SERVICE REFINING COMPANY	Boston, Mass.
CITIES SERVICE EXPORT OIL CO.	New York, N. Y.
CREW LEVICK COMPANY	Philadelphia, Pa.
EMPIRE OIL AND REFINING COMPANY	Tulsa, Okla.
INTER-STATE OIL COMPANY	La Crosse, Wis.
LINDSAY-McMILLAN COMPANY	Milwaukee, Wis.
LOUISIANA OIL REFINING CORP. (LORECO petroleum products)	Shreveport, La.
C. H. LOCKWOOD OIL COMPANY	Kenosha, Wis.
A. R. NEWCOMBE OIL COMPANY	Kingston, N. Y.
WINONA OIL COMPANY	Winona, Minn.
AUTO GAS AND SUPPLY COMPANY	Winona, Minn.

Refineries

CITIES SERVICE REFINING COMPANY	East Braintree, Mass.
CREW LEVICK COMPANY	Petty Island, N. J.—Titusville, Pa.
EMPIRE OIL AND REFINING COMPANY	Ponca City, Okla.—Okmulgee, Okla. Gainesville, Texas—East Chicago, Ind.
LOUISIANA OIL REFINING CORP. (LORECO petroleum products)	Bossier City, La. Gas Center, La.

Indian Territory Illuminating Oil Company, a Cities Service subsidiary, is one of the major producing companies in the Mid-Continent field. It brought in the discovery well of the famous Oklahoma City field where it controls more than 50% of the production. Among other pools discovered by the I. T. I. O. are the Seminole, Little River, and Bowlegs pools. The fact that all these fields were discovered in areas that other companies had believed unproductive is typical of the far-sighted operations of the Cities Service organization.

Cities Service Oils and Gasolene

North Louisiana, Arkansas, East Texas, Alabama and Mississippi's Record for Six Months

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

The number of completions for the first six months of 1932 in the North Louisiana and Arkansas division failed to reveal the actual increased activity over the corresponding period of 1931. Although the completions were less during the first half of this year, the new production and the number of active drilling wells at the close of June exceeded the number a year ago. The wildcat operations cover a larger area away from the proven fields and into hitherto unexplored territory, while Zwolle, the only active proven field, has five times as many rigs and drilling wells in operation at this time as on July 1, 1931. There were no new oil fields uncovered but several tests were completed with good enough results to warrant further drilling in those vicinities. Two wildcats were completed as fairly good gassers but the area of production is yet to be determined by future developments.

North Louisiana leads the other districts in results obtained during the first six months and also in the number of operations in progress. A DeSoto Parish wildcat, the Standard Oil Co. and Pelican Natural Gas Co.'s No. 1 Sutherlin, Section 19-12-14, was completed as a 11,700,000-foot gasser with 1,400 pounds rock pressure, at 3,004 feet. The well encountered its first show from 6 feet of gas sand at 2,776-82 feet. Seven-inch casing was set at 2,735 feet and on test the well developed a flow of 3,000,000 feet of gas with the total depth at 3,785 feet. The hole was deepened to 3,003 feet with the resultant increased flow. The new gasser is about 5 miles south of the town of Grand Cane in north central DeSoto Parish. A number of tests have previously been drilled from 3 to 5 miles from this well and had good showings of oil and gas, but as the present test checked high and had considerable thinning of the chalk formation, it is looked upon as the most important wildcat development in this district during the half year. The Spring Ridge area, 4 miles south of the town of Pleasant Hill, North Sabine Parish, was further proved up by the completion of Frank Foster's No. 1 Stevens, Section 20-9-11. The well gauged 13,379,000 feet of gas with 1,400 pounds rock pressure from 3,358 feet. The pay was encountered in the Fredericksburg in the upper part of the Lower Cretaceous. This was the second test in that vicinity, the Langbridge Oil Co.'s No. 1 Stevens, Section 17-9-11, 1 mile northeast of the Foster well, was completed in October, 1930, as a 30-bbl. pumper. The Foster well was deepened to 3,701 feet in search of an oil-bearing sand underlying the gas, but encountered salt water and was abandoned at that depth. The gas from the first completion depth had a gasoline content of 215 gallons per 1,000,000 feet. In western Caddo Parish, near the town of Blanchard, an already semiproven gas field was extended 1½ miles by the Louana Oil & Gas Co.'s No. 1 Hammock in Section 32-19-16. The well had an initial open flow of 10,000,000 feet from 7 feet of sand from 2,756-63 feet. The rock pressure was 1,150 pounds and the gasoline content of the gas was 410 gallons per 1,000,000 feet.

Zwolle Field Very Active

The Zwolle Field in Sabine Parish has experienced more activity during the first half of this year than any period since its discovery. The new drilling is confined largely to the western and eastern extremities, about 25 miles apart, but recent developments indicate that many wells will be drilled in the undeveloped territory between these points. During the six months, production has been extended to the west about 2 miles and to the south and east about the same distance. The western flank was extended 1½ miles by W. M. Coates' No. 1-B Martinez, Section 3-7-13, a 2,000-bbl. flowing well, and a few weeks later, the Pelican Natural Gas Co.'s No. 8 Sabine Lumber Co., Section 3-7-13, added another half-mile to the southwest. Since these developments, a number of good flowing wells have been completed in that area. The eastern area was extended over into Range 10 by C. H. Tuttle's No. 2 Byrd, Section 7-7-10, which flowed 1,750 bbls. daily through five-eighths-inch choke from 2,459 feet. Williams & Spears' No. 1 Williams, Section 31-8-10, has added 1½ miles to the production lines to the northeast, flowing 500 bbls. daily from 2,468 feet.

The western pool is southwest of the town of Zwolle and the eastern production is north and east of the town of Many. Results of drilling in these two new productive areas continues to be uncertain, as has been the case in this field throughout its history. Production comes from crevices or breaks in the chalk rock and operators have about an even chance of getting a well or a dry hole. The extensions seem to be slightly more consistent than the old part of the field and the wells usually have an initial open flow of from 500 to 2,500 bbls. per day. With no proration in effect in Louisiana and immediate pipe line connections assured, the Zwolle Field, even with its inconsistency, allows a profit for its operators, and in all probability will continue to experience much activity during the remainder of this year. These recent extensions and logs of outlying wildcats indicate that there are several more miles of chalk rock producing territory in that area.

Wildcatting in Mississippi

The anticipated wildcat campaign in Mississippi has materialized to some extent, but there is far less activity in that State than was predicted the first

NORTH LOUISIANA

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
CADDO (light):							
Daily average	5,382	5,313	5,408	5,485	5,425	5,242	
Month	166,842	154,077	167,648	164,550	168,175	157,260	978,552
CADDO (heavy):							
Daily average	1,618	1,985	2,001	2,050	2,094	2,016	
Month	50,158	57,565	62,031	61,500	64,914	60,480	356,648
HOMER:							
Daily average	2,845	2,894	2,875	2,883	2,914	2,883	
Month	88,195	83,926	89,125	86,490	90,334	86,490	524,560
HAYNESVILLE:							
Daily average	4,987	4,794	4,664	4,453	4,416	4,344	
Month	154,597	139,026	144,584	133,590	136,896	130,320	839,013
DE SOTO-RED RIVER:							
Daily average	2,055	1,977	2,043	1,995	1,980	2,007	
Month	63,705	57,333	63,333	59,850	61,380	60,210	365,811
ELM GROVE:							
Daily average	344	332	341	297	306	288	
Month	10,664	9,628	10,571	8,910	9,486	8,640	57,899
COTTON VALLEY:							
Daily average	503	501	565	536	529	846	
Month	15,593	14,529	17,515	16,080	16,399	25,380	105,496
URANIA:							
Daily average	3,242	3,149	3,020	3,485	3,567	3,572	
Month	100,502	91,321	93,620	104,550	110,577	107,160	607,730
PLEASANT HILL:							
Daily average	350	327	317	297	292	284	
Month	10,850	9,483	9,827	8,910	9,052	8,520	56,642
ZWOLLE:							
Daily average	6,468	5,967	5,612	6,367	6,906	7,114	
Month	200,508	173,043	173,972	191,010	214,086	213,420	1,166,039
HOLLY:							
Daily average	324	326	299	308	302	305	
Month	10,044	9,454	9,269	9,240	9,362	9,150	56,519
SAREPTA-CARTERSVILLE:							
Daily average	827	863	811	830	811	947	
Month	25,637	25,027	25,141	24,900	25,141	28,410	154,256
Daily average	28,945	28,428	27,956	28,986	29,542	29,848	28,951
Total first six months 1932	897,295	824,412	866,636	869,580	915,802	895,440	5,269,165
Total first six months 1931	1,274,255	1,229,788	1,247,130	1,170,330	1,219,106	1,086,780	7,227,389
Total first six months 1930	1,163,554	1,138,396	1,271,465	1,258,500	1,226,701	1,200,630	7,259,246
Total first six months 1929	1,114,171	990,024	1,109,986	1,069,200	1,097,121	1,068,960	6,449,462
Total first six months 1928	1,369,146	1,313,555	1,369,115	1,411,890	1,383,034	1,272,040	8,118,780
Total first six months 1927	1,589,122	1,474,004	1,589,711	1,511,250	1,469,710	1,435,020	9,068,817

ARKANSAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
EL DORADO:							
Daily average	3,140	3,073	3,043	3,132	3,044	3,042	
Month	97,340	89,117	94,333	93,960	94,364	91,260	560,374
SMACKOVER (light):							
Daily average	2,973	2,950	2,888	2,915	2,940	2,877	
Month	92,163	85,550	89,528	87,450	91,140	86,310	532,141
SMACKOVER (heavy):							
Daily average	23,595	22,915	23,224	23,683	23,645	23,961	
Month	731,445	664,535	719,944	710,490	732,995	718,830	4,278,239
STEPHENS:							
Daily average	663	657	660	634	649	672	
Month	20,553	19,053	20,460	19,020	20,119	20,160	119,365
NEVADA COUNTY:							
Daily average	1,211	1,222	1,241	1,216	1,122	1,078	
Month	37,541	35,438	38,471	36,480	34,782	32,340	215,052
LISBON:							
Daily average	566	569	556	535	505	503	
Month	17,546	16,501	17,236	16,050	15,655	15,090	98,078
BRADLEY:							
Daily average	1,201	1,187	.....	.....	.....	.....	
Month	37,231	34,423	.....	.....	.....	.....	71,654
CHAMPAGNOLLE:							
Daily average	1,909	1,810	1,873	1,874	1,904	1,883	
Month	59,179	52,490	58,063	56,220	59,024	56,490	341,466
URBANA:							
Daily average	278	395	802	965	533	83	
Month	8,618	11,455	24,862	28,950	16,523	2,490	92,898
Daily average	35,536	34,778	34,287	34,954	34,342	34,099	36,666
Total first six months 1932	1,101,616	1,008,562	1,062,897	1,048,620	1,064,602	1,022,970	6,309,267
Total first six months 1931	1,574,955	1,402,492	1,469,245	1,412,220	1,446,274	1,344,450	8,649,636
Total first six months 1930	1,817,685	1,608,376	1,817,871	1,724,460	1,659,895	1,704,060	10,332,347
Total first six months 1929	2,453,526	2,154,194	2,303,734	2,188,680	2,220,158	2,112,270	13,432,562
Total first six months 1928	2,791,922	2,571,575	2,687,948	2,472,600	2,843,847	3,075,911	16,443,803
Total first six months 1927	4,076,469	3,574,256	3,853,920	3,378,240	3,493,669	3,365,760	21,742,314

of this year. The Jackson gas field in Hinds and Rankin Counties has experienced one of its most prolific and active periods during the first six months of 1932. This area reported 27 completed gas wells for the first half of the year with a total initial open flow of 987,047,000 feet. The same period in 1931 reported 15 completed gassers with a total initial open flow of 330,500,000 feet. Only slight extensions of from one-fourth to one-half of a mile were added to the productive area of the field. Most of the new producers were centered around Section 12-5n-1e, on the Rankin County side of Pear River. A number of them extended northeast and southwest from this point. The Hinds County area, in which is located the city of Jackson, furnished a number of good gassers, but this part of the field was not drilled as intensively as the Rankin area. A wildcat in Sharkey County, the United Gas Public Service Co.'s No. 1 Lenhart, Section 14-14n-6w, was one of the few wildcats completed in Mississippi this year. The test, located on a 70,000-acre block with good geophysical and magnetometer reports, was dry and abandoned at 3,807 feet. Another important wildcat in the State to prove a disappointment was the Gulf Refining Co.'s No. 1-A Long Bell Lumber Co., Section 25-12-25, in Clarke County. This test developed 30 feet of 16.8 gravity oil from the Eutaw sand from 3,692-3,700 feet, but failed to make a commercial producer. The hole was deepened to 4,775 feet and abandoned in the Tuscaloosa formation at this depth without encountering another producing sand. In Jasper County, the Bay Springs Petroleum Co.'s No. 1 Keys, Section 21-2-10, was dry and abandoned at 3,703 feet, making the third dry hole out of as many wildcat completions in Mississippi for the first half of 1932.

Slump in Arkansas

Arkansas failed to recover from its slump of the past two years, reporting only 18 completions, 16 of which were dry holes, the 2 producers yielding 335 bbls. of initial production. A good number of these completions were old tests that have been inactive and temporarily abandoned for the last year. Union County furnished one-half of the completions and all of the production. A wildcat in Ashley County, north of Morehouse Parish, in the Monroe gas field of North Louisiana, was closely watched during the process of drilling. D. S. Brooks' No. 1 Crossett Lumber Co., Section 31-15s-6w, was abandoned in salt water sand at 4,031 feet. The test topped the Nacatoch at 3,155 feet and a drill stem test developed a small show of oil at that depth. From 3,169-79 feet, a test was made and developed a show of oil and eight fourbles of salt water. The other active wildcat abandonments in Arkansas were all in Union County in close proximity to the old producing fields. A wildcat in Miller County, Fitzwater and others' No. 1 Beck, Section 33-15-26, was reported coring 6 feet of likely looking sand from 2,919-26 feet. Six-inch casing was set but no test has been made to date. The wildcat is in the vicinity of the Lentz tests, drilled about two years ago, one of which had a good show of low gravity oil from this horizon.

Revival in Alabama

Alabama was added to the list of active districts during the first half of this year with three wildcat tests drilling and a number of locations staked on large blocks with good geological reports. The three drilling wildcats, one of which has been completed as a dry hole, are along the western border of the State near the Mississippi line. In Clarke County, the Tidal Oil Co. and others drilled No. 1 Hobson, Section 33-6n-2e, to 4,533 feet where it was abandoned in the Tuscaloosa formation. The test proved quite a disappointment as it was located on a good geological structure in the vicinity of what is known as the Jackson fault and the Hatchetigbee anticline. The top of the chalk was encountered at 801 feet with the base at 1,340 feet. A likely looking sand was cored around the 2,000-foot level and a drill stem test was made without developing a good show of oil or gas. The Ramsey Petroleum Co. and the Ohio Oil Co. were interested with the Tidal in drilling the test. A Lamar County test, the DeSoto Oil & Gas Co.'s No. 1 Gardner, Section 22-15s-16w, is being drilled with cable tools. In Mobile County, southwest Alabama, the Ohio Oil Co. is drilling its No. 1 Bethel, Section 34-3s-2w, on a large block with a contract for a 7,000-foot test.

Quiet in Texas Border Counties

With the exception of one hot spot in the northeastern part of Shelby County, the border counties of East Texas have experienced little active drilling this year. A majority of the tests with rigs still on them were started during 1931 and have been shut down and temporarily abandoned on top of the Georgetown lime, a distinct dry marker in this district. The active Shelby County area is in the northeastern part of the county, near Joaquin on the west side of Sabine River from DeSoto Parish, North Louisiana. One shallow test in this area was completed as a commercial pumper from the Nacatoch sand, but other tests drilled in the vicinity failed to confirm an oil field of any size from this horizon. The discovery well, the Oil News' No. 1 Pickering Lumber Co., G. H. Patterson Survey, was completed at 1,518 feet, was standardized, and is pumping 50 bbls. of fluid, 30 per cent salt water. Results from deeper tests in that area indicates that the lower horizons, probably the Glen Rose of the Upper Trinity, will produce large quantities of gas.

Oversupply of Gas

The gas fields in North Louisiana and East Texas registered a greater decline in drilling operations than any other areas. The fields, with the present number of wells, can oversupply the pipe line withdrawals, so there is no necessity for new production. During the first six months of 1932, North Louisiana completed only 19 gas wells, including three wildcats, with a total open flow of 177,800,000 feet. The corresponding period in 1931 completed 46 wells with a total initial open flow of 1,070,746,407 feet. The gas areas in Sebastian, Johnson and Franklin Counties, Arkansas, added 74,550,000 feet of new production during the first half of 1931 to none for the same period in 1932. The Bethany gas area in Panola County, East Texas, was practically inactive, only a few gas wells being completed from the upper horizons with a small initial flow. No wells were drilled to the Trinity.

Of the deep tests drilling in this division during the past six months, one has been junked and abandoned and the other two are still active and uncompleted. The deepest test yet drilled in Arkansas was the Lion Oil & Refining Co.'s No. 9-A G. P. Hayes, Section 4-16-15, in the Smackover Field, Union County. The crew was unable to recover drill stem stuck at 7,255 feet and the well was abandoned at that depth. Only a few small shows of dead oil were encountered in the test after topping the red beds at 3,341 feet. A total of 1,281 feet of rock salt had been penetrated from the top of this formation at 5,974 feet to the total depth at 7,255 feet. The two deep tests in the Zwolle area have had barren results so far. R. L. Gay's No. 1-A Long Bell Lumber Co., Section 10-8-13, northwest of Zwolle production, has reached a total depth of 6,052 feet. This well recovered 6 feet of Oolitic limestone with a strong petroleum odor from 4,775-89 feet from the Glen Rose of the Upper Trinity. Six and five-eighths-inch casing was set at 4,725 feet but in drilling the plug, the bit penetrated below the original depth of the Oolitic lime core encountering salt water and the well was never tested. Small streaks of anhydrites were encountered from 5,490-5,588 feet and a flow of hot salt water occurred from 5,925-45 feet. The other deep test is the Loring Oil Co.'s No. 18 Bowman-Hicks, Section 15-7-12, about 15 miles southeast of the Gay test. The Loring well is in the southern part of the proven area of Zwolle. The total depth of this test at this writing is 5,277 feet. Three feet of Oolitic lime, the same found in the Gay well at 4,775 feet, has been cored from 5,272-75 feet. Arrangements are being made to set 6⅝-inch casing at 5,270 feet to test this formation.

NORTH LOUISIANA
Completions by Parishes First 6 Months 1932

	Comp.	Prod.	Dry	Gas*
Bossier	6	10	3	2
Caddo	6	140	0	4
Claiborne	1	0	0	1
DeSoto	4	0	3	1
Morehouse	2	6	0	2
Natchitoches	4	0	3	1
Ouachita	2	0	1	1
Red River	1	10	0	0
Richland	2	0	0	2
Sabine	89	21,556	47	1
Union	4	0	0	4
Webster	1	0	1	0
Total	122	21,716	58	19

*Gas production in cubic feet: Bossier, 23,000,000 feet; Caddo, 17,500,000 feet; Claiborne, 18,867,000 feet; DeSoto, 11,700,000 feet; Morehouse, 14,000,000 feet; Natchitoches, 3,000,000 feet; Ouachita, 2,000,000 feet; Richland, 49,384,000 feet; Sabine, 13,379,000 feet; Union, 24,970,000 feet. Total, 177,800,000 feet.

Completions by Months

	Comp.	Prod.	Dry	Gas
January	19	5,520	8	3
February	15	1,110	9	1
March	23	570	13	5
April	13	2,230	7	2
May	29	3,281	5	3
June	32	9,005	16	5
Ttl. first 6 mo. 1932	122	21,716	58	19
Ttl. first 6 mo. 1931	165	17,563	85	46
Difference	43	4,153	27	27

ARKANSAS
Completions by Counties First 6 Month 1932

	Comp.	Prod.	Dry	Gas
Ashley	1	0	1	0
Cleburne	1	0	1	0
Crawford	1	0	1	0
Columbia	1	0	1	0
Little River	1	0	1	0
Loanoke	1	0	1	0
Ouachita	1	0	1	0
Scott	1	0	1	0
Union	9	335	7	0
Yell	1	0	1	0
Total first 6 mo. 1932	18	335	16	0

Completions by Months

	Comp.	Prod.	Dry	Gas
January	2	0	2	0
February	1	0	1	0
March	1	35	0	0
April	4	300	3	0
May	3	0	3	0
June	7	0	7	0
Total first 6 mo. 1932	18	335	16	0
Total first 6 mo. 1931	42	2,078	25	5
Difference	24	1,743	9	5

MISSISSIPPI
Completions by Counties First 6 Months 1932

	Comp.	Prod.	Dry	Gas*
Clarke	1	0	1	0
Hinds	9	0	0	9
Jasper	1	0	1	0
Monroe	2	0	2	0
Rankin	20	0	2	18
Sharkey	1	0	1	0
Warren	1	0	1	0
Total first 6 mo. 1932	35	0	8	27

*Gas production: Hinds, 271,872,000 feet; Rankin, 715,175,000 feet. Total, 987,047,000 feet.

Completions by Months

	Comp.	Prod.	Dry	Gas
January	10	0	2	8
February	5	0	2	3
March	7	0	0	7
April	5	0	0	5
May	2	0	1	1
June	6	0	3	3
Total first 6 mo. 1932	35	0	8	27
Total first 6 mo. 1931	42	0	27	15
Difference	7	0	19	12

EAST TEXAS (Gas Area)
Completions by Counties First 6 Months 1932

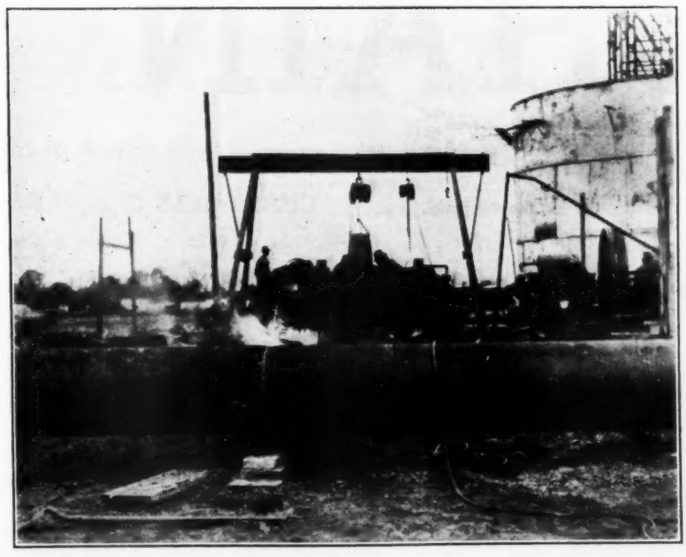
	Comp.	Prod.	Dry	Gas*
Camp	1	0	1	0
Cass	6	0	6	0
Harrison	3	0	2	1
Marion	2	0	2	0
Panola	6	6	1	5
Red River	2	0	2	0
Shelby	4	0	4	0
Total first 6 mo. 1932	24	0	18	6

*Gas production: Harrison, 4,000,000 feet; Panola, 24,184,000 feet. Total 28,184,000 feet.

Completions by Months

	Comp.	Prod.	Dry	Gas
January	3	0	2	1
February	3	0	2	1
March	3	0	2	1
April	8	0	5	3
May	6	0	6	0
June	1	0	1	0
Total first 6 mo. 1932	24	0	18	6
Total first 6 mo. 1931	31	0	27	4
Difference	7	0	9	2

EAST TEXAS GASOLINE PLANT



View of construction of Gulf Production Co. gasoline plant, Overton, Tex.

NEW OIL FIELD IN BASHKIRIA

Crude oil production in the area of Herlitimac (Ural) Russia, is reported continuing with great success. From one of the new wells, No. 703, with a depth of 700 meters, there is a continued outflow of gas and also periodically of oil. The new area seems to be very rich in oil resources. In a few days 1,200 tons of crude oil were produced. The rapid development of the new area is hampered at the moment by the absence of the necessary transport and of technical equipment. The geographical position of the new area, not far from the industrial districts of the Urals, is very well situated and there are great hopes of its rapid development.

PIPE LINE CONTRACT

J. F. Pritchard & Co., Kansas City, Mo., closed a contract with the Northern Gas Engineering Co. for the construction of 25 miles of 8-inch line with Dresser sleeve couplings running into Austin, Minn. This line is a take-off from the main 16-inch line of the company and is to serve the community of Austin with natural gas.

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CHABELCO

Few Discoveries Were Made on Gulf Coast in First Half, But Conroe Field Was Proved

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

The new Conroe district of central Montgomery County, Texas, was the center of interest on the Gulf Coast the first half of 1932. The field was opened at the close of 1931, and to date three additional wells have been completed, making important extensions to the productive area and indicating that a pool of more than ordinary consequence is in the making.

On July 1 a dozen rigs were actively running, scattered over a radius of 6 miles of the discovery well, and additional locations were being made and more rigs were being moved in.

Steps were taken quickly by the Railroad Commission in the form of adoption of rules to eliminate unnecessary and wasteful drilling, regulate certain drilling, regulate completion and production procedure and providing for the use of equipment to minimize hazards which might result in damage to the field and sands, and to restrict the gas-oil ratio.

However, no limits on production were set by the commission except so far as the gas-oil ratio was restricted. At the time the orders were put into effect there were only four wells, two of these being primarily gassers and the other two being shut in because of no oil outlet, so there was nothing on which to base any production proration. Since July 1, with the completion by Humble Pipe Line Co. of an 8-inch line into the field, the Humble Oil & Refining Co. has placed into effect a company proration, restricting its purchases and runs to 10 bbls. daily per acre. Thus, with the Railroad Commission order limiting drilling to one well for each 20 acres, each well so drilled would be allowed only 200 bbls. daily, and in no case will more than 400 bbls. daily be taken from any one well. Guaranteeing ratable takings, Humble Oil & Refining Co. has made the order applicable to its own properties as well as others.

Field Close to Market

So far Humble Pipe Line Co. is the only company to make connection with the field, this company having completed only the past week the laying of 28 miles of 8-inch line from Satsuma, a station on its North Texas-Gulf Coast trunk system. Six other companies have trunk lines passing near the field, the farthest of which is only 20 miles distant. Magnolia Pipe Line Co.'s main line is almost directly through the field. The field itself is within 40 miles of deep water terminal facilities along the Houston Ship Channel and would necessitate very little new pipe line laying. However, Humble Oil & Refining Co. has been the largest purchaser in the district, and with its newly acquired holdings embodying the bulk of what now is looked upon as the main producing area, it is likely that other companies will be slow to connect with the field and Humble may be left very much alone in the area.

The discovery well, G. W. Strake's No. 1 South Texas Development Co., located in the Theodore Slade Survey, about 3½ miles as the crow flies southeast of the town of Conroe, was completed December 13, 1931. It came in making an estimated 15,000,000 feet of gas with a pressure of around 1,500 pounds, and spraying a distillate, almost water-colored. This distillate, the volume of which ran as high as 100 bbls. daily, was looked upon as a light gravity crude rather than condensate from the gas, and late developments have borne out this belief by indicating that the well was completed barely in the top of the producing horizon, if not entirely in the gas horizon immediately above the oil pay. Its total depth was 4,991 feet, while later wells have been drilled to low as 5,186 feet to get the oil sand. Since completion of this well, the pressure has gradually been built up to above 2,300 pounds although the well has been produced steadily. The gas has been used for fuel for other drilling operations and also has been piped to the town of Conroe, which formerly did not have gas. The fluid production has been run to a small skimming plant which has been built near the field to supply local consumption with a high antiknock motor fuel.

The well at first created no particular interest. Operators and lease buyers generally were skeptical. The area had not been looked upon very favorably as there were virtually no surface indications of a structure and geophysical work had not shown any definite indications. The well was on an 8,000-acre block and general opinion was that if there was any additional production it would be confined to that block as it was not considered

GULF COAST—TEXAS

Daily Average and Monthly Production First Six Months of 1932

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
ALLEN:							
Daily average	15	15	12	13	13	16	
Month	467	438	373	392	406	480	2,556
BARBERS HILL:							
Daily average	20,324	17,797	18,245	19,141	20,571	20,711	
Month	630,042	516,113	565,599	574,227	637,704	621,322	3,545,007
BATSON:							
Daily average	860	819	806	778	842	844	
Month	26,665	23,754	24,981	23,338	26,101	25,306	150,145
BIG CREEK:							
Daily average	1,224	1,281	1,223	1,144	1,091	1,096	
Month	37,947	37,150	37,915	34,324	33,827	32,888	214,051
BLUE RIDGE:							
Daily average	965	918	1,271	973	988	1,005	
Month	29,911	26,629	39,404	29,191	30,628	30,163	185,917
BRENHAM:							
Daily average	33	25	27	25	22	33	
Month	1,020	720	833	754	685	985	4,997
BOLING:							
Daily average	607	639	629	695	632	621	
Month	18,814	18,537	19,498	20,846	19,593	18,636	115,924
CLAY CREEK:							
Daily average	518	507	757	1,039	1,138	1,217	
Month	16,053	14,707	23,465	31,172	35,279	36,519	157,195
CONROE:							
Daily average	.....	.....	82	130	119	304	
Month	.....	.....	2,546	3,901	3,682	9,111	19,240
DAMON MOUND:							
Daily average	1,055	998	1,111	882	445	548	
Month	32,709	28,940	34,448	26,455	13,796	16,446	152,794
ESPERSON:							
Daily average	1,419	1,309	1,421	1,411	1,328	1,453	
Month	43,985	37,964	44,051	42,330	41,167	43,598	253,095
FANNETT:							
Daily average	389	418	403	400	378	410	
Month	12,056	12,125	12,491	11,992	11,714	12,295	72,673
GOOSE CREEK:							
Daily average	3,619	3,487	3,466	3,453	*3,591	3,693	
Month	112,183	101,120	107,444	103,596	111,325	110,790	646,458
HANKAMER:							
Daily average	1,700	2,008	1,966	1,760	2,176	1,839	
Month	52,700	58,237	60,943	52,795	67,459	55,174	347,308
HIGH ISLAND:							
Daily average	1,380	1,495	2,022	2,478	4,227	4,538	
Month	42,785	43,351	62,685	74,335	131,033	136,125	490,314
HULL:							
Daily average	4,808	4,691	4,994	4,229	4,972	5,430	
Month	149,046	136,035	154,817	126,871	154,136	162,896	883,801
HUMBLE:							
Dail yaverage	5,762	5,714	5,725	6,317	6,537	6,439	
Month	178,629	165,709	177,471	189,511	202,644	193,181	1,107,145
LOST LAKE:							
Daily average	285	336	345	351	309	608	
Month	8,330	9,740	10,694	10,524	9,580	18,228	67,096
MANVEL:							
Daily average	401	358	233	359	395	392	
Month	12,438	10,388	7,222	10,774	12,241	11,754	64,817
MARKHAM:							
Daily average	1,730	1,335	1,301	1,213	1,108	1,837	
Month	53,636	38,710	40,335	36,389	34,342	55,096	258,508
McFADDIN:							
Daily average	.....	264	99	41	30	11	
Month	.....	7,658	3,068	1,233	929	344	13,232
MOSS BLUFF:							
Daily average	118	129	123	118	127	117	
Month	3,658	3,744	3,810	3,536	3,935	3,500	22,183
MYKAWA:							
Daily average	24	.....	106	284	622	283	
Month	749	.....	3,285	8,521	19,283	8,490	40,328
NASH:							
Daily average	183	175	173	169	153	151	
Month	5,670	5,071	5,366	5,074	4,741	4,525	30,447
NORTH DAYTON:							
Daily average	387	298	341	341	331	319	
Month	11,993	8,645	10,570	10,235	10,259	9,555	61,257
ORANGE:							
Daily average	1,413	1,358	1,320	1,316	1,349	1,351	
Month	43,805	39,381	40,927	39,473	41,818	40,539	245,943
ORCHARD:							
Daily average	1,066	1,108	1,318	1,345	1,195	901	
Month	33,049	32,137	40,856	40,350	37,047	27,030	210,469
PIERCE JUNCTION:							
Daily average	5,165	5,515	6,063	5,413	5,101	4,530	
Month	160,112	159,938	187,955	162,396	158,130	135,908	964,439
PORT NECHES:							
Daily average	1,030	927	849	1,182	1,193	1,135	
Month	31,933	26,880	26,316	35,462	36,984	34,054	191,629
RABBS RIDGE:							
Daily average	9,455	8,557	8,030	9,301	10,097	12,482	
Month	293,108	24,155	248,936	279,023	313,002	374,463	1,756,687
RACCOON BEND:							
Daily average	5,063	4,854	4,919	4,860	4,920	4,743	
Month	156,956	140,766	152,484	145,803	152,518	142,298	891,825
REFUGIO:							
Daily average	13,507	11,462	10,382	9,759	9,426	9,482	
Month	418,712	332,396	321,845	292,761	292,207	284,469	1,942,390
ROCKLAND:							
Daily average	5	.....	2	11	20	30	
Month	155	.....	63	334	619	901	2,072

(Continued on Next Page)

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IN GAS PURIFIERS

Report of a Competitive Four-Way Test:

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"They use Iron Oxide Alkalized. The Purifiers are pitting and corroding badly. Last September they coated four strips about four feet wide in one of them—one strip with red lead, one with_____, one with an antirust paint guaranteed to prevent rust and one with NO-OX-ID.

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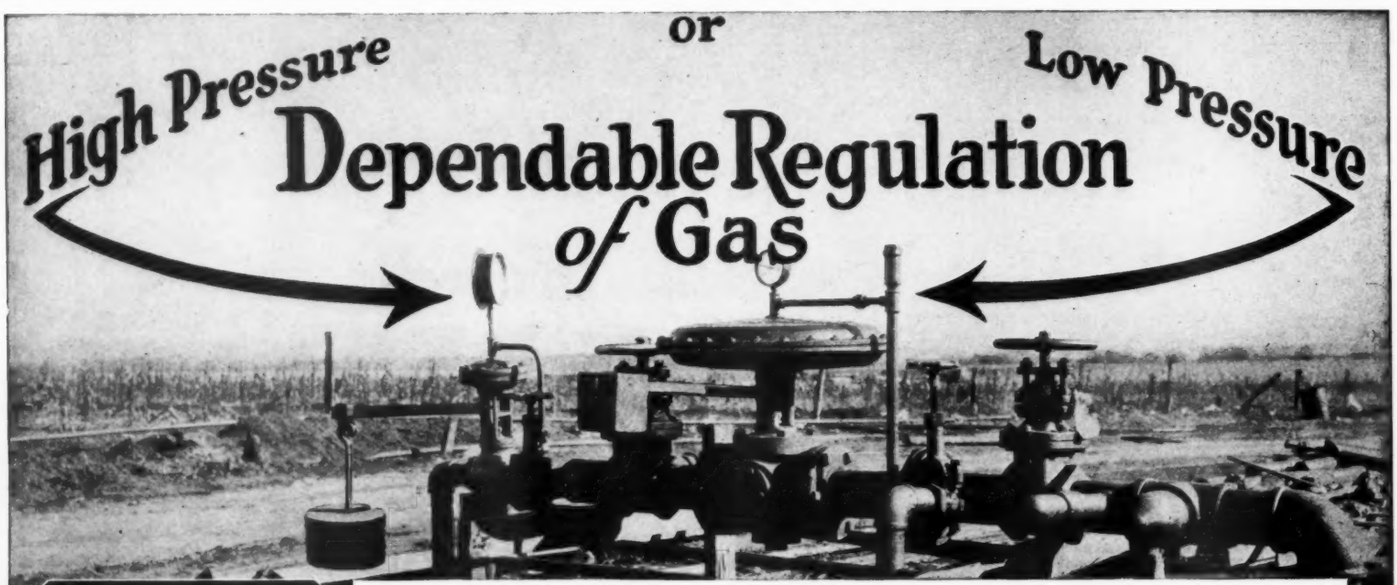

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possible for a large pool to exist, and if a field did exist it was expected to be gas.

However, some acreage adjoining the Strake block to the east was taken by Heep Oil Corp. and a second test, No. 1 Cartwright, located in the John Davis Survey, 1½ miles northeast of the discovery well, was started. It was drilled as a closed-house or mystery operation, but when it got to the pay horizon at a total depth of 5,078 feet and rumors got out that it was showing for an oil producer, a leasing spurt took place, but when the well was completed for a gas well similar to the discovery well, interest quickly cooled. A little later, a new stimulus was given the area when Humble Oil & Refining Co. took an option on 4,368 acres of the Strake block belonging to the South Texas Development Co. and made a deal for the development of the property. The first well drilled under this transaction was Strake Oil Corp.'s No. 2 South Texas Development Co., 2,400 feet to the south of the discovery well, which in a sand at 5,026 feet came in as the first "black" oil producer, estimated as good for 1,200 bbls. daily. It was shut in for outlet and a few days later Heep Oil Corp.'s No. 1 Freeman, about three-quarters of a mile to the east of that company's No. 1 Cartwright, came in for an 800-bbl. well at 5,122 feet. These wells definitely proved the field and since then active development has got under way. The oil in the latter wells was 38.4 and 37.1 gravity, respectively.

Developments have been marked by a steady acquisition of acreage by the Humble Oil & Refining Co. although independents hold scattered smaller tracts. The Texas Company, Shell Petroleum Corp., Yount Lee Oil Co. and Sun Oil Co. are among larger companies which have fair sized tracts, in addition to the approximate 3,500 acres retained by G. W. Strake individually.

Conroe generally is looked upon as being a nonsalt dome type of field although as yet it has not been determined what the structural conditions are. The production is from that transitory age between marine and nonmarine deposition called by some as being at the base of the Dibollensis (lower Jackson) and by others as being Cockfield (upper Yequa). It is along that "Jackson" trend at the Reynosa-Lagarto contact which includes such nonsalt dome fields as Raccoon Bend and Pettus.

Discovery in Louisiana

In the salt dome district of the Gulf Coast, a new field was opened during the first half of the year, that being Gueydan, Vermillion Parish, Louisiana. The discovery well, Pure Oil Co.'s No. 2 Alliance Trust Co., 1,875 feet east and 950 feet south of the NW cor., Section 34-11s-1w, was completed first on April 22 in a sand at 3,532-52 feet, flowing initially at the rate of 800 bbls. daily of pipe line oil testing 25 gravity. The well, however, failed to hold up after starting to make a large volume of salt water, and then was deepened finding a lower sand at a total depth of 4,029 feet, in which it was completed June 2, flowing 38 bbls. hourly of 27.2 gravity pipe line oil.

The discovery well was the fourth test drilled on the dome, a geophysical find made by Pure Oil Co. in 1929. That well was preceded by No. 1 Alliance Trust Co., which was abandoned at 6,458 feet in salt topped at 6,404 feet. Finding of salt in that test definitely proved the geophysical check. The discovery well is 1,575 feet east and 1,780 feet north of that test. The other two tests, Nos. 1 and 2 Southwest Louisiana Land Co., drilled to 6,594 feet and 8,007 feet respectively, were located to the southwest. A fifth test, located southeast of the discovery well, now is drilling.

To handle this crude, Pure Oil Co. has laid a small line a short distance to a loading rack on a railroad and is shipping the oil to its Smiths Bluff refinery south of Beaumont. Pure Oil Co. owns a large part of the acreage at Guyedan although Magnolia Petroleum Co., Humble Oil & Refining Co. and Gulf Refining Co. have holdings.

A Matagorda Prospect

Indications of another new field were given in a wildcat drilled by United North & South Development Co. in the J. C. Keller Survey, on the edge of the Buckeye townsite, Matagorda County, Texas. This test, drilled to a total depth of 7,831 feet, encountered showings of oil, in which operators for several months have been trying to complete a well. Several strings of pipe have collapsed in the hole in the efforts of operators to set casing and screen and numerous fishing jobs have delayed work. At one time the well started flowing several heads of oil but so far production has not been commercial, and at present a fishing job is under way to recover the swab.

Important extensions of production were made in a number of fields despite the fact that operations generally over the Coast were inactive the earlier months of the year. During the later months, however, there has been a decided increase in activity, not only around many of the fields but also in wildcatting. Among extensions were the opening of a new shallow pool at East Hackberry in the cap rock and the discovery of flank sand production on the northwest side of the dome. The cap rock pool, one of the few cap rock fields which have been opened on the Gulf Coast in recent years, marked the third shallow field which has been found at East Hackberry, where original production was developed in flank sands skirting the south side of the dome. The opening of the new cap rock pool, by Calcasieu Oil Co.'s No. 1 Unsurveyed Island, located some 1,500 feet to the southwest of the nearest shallow production on the dome and about the same distance to the northwest of the south flank production, was followed by the drilling of a half dozen additional wells in offsets but the latest wells have not been so favorable and activity has subsided about as quickly as it sprang up. This short-life play was characteristic of the two other shallow pools on the dome. On the northwest flank, Union Sulphur Co.'s No. 1 Gulf Land-Humble Lease, a rank wildcat in territory previously undrilled, found a sand at a total depth of 6,001 feet and made a 1,500-bbl. well, which has shown consistent production. A second well in this area has recently drilled into salt at 5,720-5,841 feet and has been abandoned as dry. A third test, Union Sul-

GULF COAST (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	Total 6 mos. (bbls.)
SARATOGA:							
Daily average	949	944	1,005	961	947	897	
Month	29,415	27,372	31,152	28,835	29,355	26,909	173,038
SOUR LAKE:							
Daily average	1,575	1,671	1,557	1,552	1,564	1,573	
Month	48,825	48,456	48,266	46,562	48,487	47,186	287,782
SOUTH LIBERTY:							
Daily average	1,344	1,199	1,161	1,107	1,086	1,093	
Month	41,668	34,774	35,991	33,209	33,668	32,798	212,108
SPINDLETOP:							
Daily average	4,907	4,627	4,283	4,100	3,829	3,319	
Month	152,110	134,185	132,773	123,011	118,696	99,556	760,331
SUGARLAND:							
Daily average	9,700	10,154	10,133	7,998	9,992	10,038	
Month	300,702	294,461	314,126	239,944	309,751	301,131	1,760,115
WEST COLUMBIA:							
Daily average	2,939	3,641	3,761	3,776	4,198	3,924	
Month	91,112	105,586	116,591	113,285	130,140	117,718	674,432
Daily average	105,924	101,033	101,664	100,425	107,062	109,412	104,279
Month	3,283,148	2,929,963	3,151,595	3,012,764	3,318,911	3,282,367	18,978,748

GULF COAST—SOUTH LOUISIANA

ANSE LA BUTE:							
Daily average	55	57	57	55	50	45	
Month	1,700	1,656	1,769	1,649	1,550	1,345	9,669
BAYOU BLUE:							
Daily average	20	15	15	15	6	.....	
Month	622	431	465	452	187	.....	2,157
BLACK BAYOU:							
Daily average	1,286	1,261	1,198	1,082	1,076	905	
Month	39,869	36,563	37,136	32,458	33,354	27,139	206,519
CHOCTAW:							
Daily average	451	485	483	444	428	405	
Month	13,984	14,060	14,972	13,326	13,263	12,144	81,749
CAMERON MEADOWS:							
Daily average	293	279	.....	.....	.....	128	
Month	9,080	8,096	.....	.....	.....	3,825	21,001
EDGERLY:							
Daily average	217	240	203	221	267	242	
Month	6,728	6,968	6,294	6,631	8,278	7,261	42,160
GUEYDAN:							
Daily average	.....	.....	.....	66	60	551	
Month	.....	.....	.....	1,977	1,859	16,532	20,368
HACKBERRY (EAST):							
Daily average	4,806	3,456	4,304	8,035	8,523	6,085	
Month	148,982	100,225	133,429	241,057	264,215	182,540	1,070,448
HACKBERRY (OLD):							
Daily average	602	589	570	566	473	520	
Month	18,668	17,086	17,670	16,985	14,666	15,608	100,683
IOWA:							
Daily average	516	512	488	552	1,024	1,023	
Month	15,990	14,843	15,126	16,558	31,743	30,701	124,961
JENNINGS:							
Daily average	517	438	399	422	451	933	
Month	16,029	12,702	12,366	12,661	13,985	27,992	95,735
LAKE BARRE:							
Daily average	3,851	4,452	5,190	6,910	8,912	7,538	
Month	119,386	129,104	160,890	207,305	276,274	226,143	1,119,108
LAKE PELTO:							
Daily average	56	68	59	66	65	79	
Month	1,730	1,972	1,828	1,979	2,010	2,375	11,894
LAKE WASHINGTON:							
Daily average	200	325	531	374	705	509	
Month	6,203	9,420	16,262	11,222	21,853	15,278	74,238
LEESVILLE:							
Daily average	1,172	811	799	1,155	869	835	
Month	36,332	23,516	24,767	34,641	26,937	25,057	171,250
LOCKPORT:							
Daily average	3,929	3,123	2,886	2,869	2,567	2,327	
Month	121,795	90,569	89,465	86,075	79,573	69,796	537,273
PORT BARRE:							
Daily average	572	629	999	1,323	1,221	1,366	
Month	17,737	18,247	30,968	39,693	37,858	40,978	185,481
SORRENTO:							
Daily average	90	75	63	64	32	55	
Month	2,793	2,178	1,954	1,916	994	1,652	11,487
STARKS:							
Daily average	555	583	583	580	514	609	
Month	17,200	16,902	18,075	17,395	15,931	18,258	103,761
SULPHUR:							
Daily average	3,868	4,040	2,431	2,446	2,497	2,009	
Month	119,903	117,166	75,362	73,381	77,409	60,267	523,488
SWEET LAKE:							
Daily average	900	873	839	774	699	697	
Month	27,909	25,310	26,009	23,225	21,663	20,911	145,027
VINTON:							
Daily average	4,369	4,473	4,519	4,416	4,397	4,609	
Month	135,436	129,714	140,089	132,474	136,306	138,263	812,282
WELSH:							
Daily average	8	5	5	5	5	53	
Month	248	145	158	148	154	1,605	2,458
WHITE CASTLE:							
Daily average	541	545	563	539	543	544	
Month	16,779	15,802	17,455	16,169	16,837	16,317	99,359
Daily average	28,874	27,334	26,984	32,979	35,384	32,067	30,618
Month	895,103	792,675	836,509	989,377	1,096,899	961,993	5,572,556
Total Gulf Coast daily average	134,798	128,367	128,648	133,404	142,446	141,479	134,897
Total first six months 1932	4,178,761	3,722,638	3,988,104	4,002,141	4,415,809	4,244,365	24,551,304
Total first six months 1931	5,598,347	4,836,692	5,081,815	5,354,911	5,499,710	4,881,273	31,422,135
Total first six months 1930	5,881,489	5,619,270	6,105,265	5,980,067	6,181,740	6,214,648	35,982,479
Total first six months 1929	4,344,233	3,959,613	4,586,507	4,705,904	4,673,923	4,484,434	26,754,614
Total first six months 1928	3,796,856	3,652,390	3,796,816	3,760,253	4,155,544	4,114,796	23,276,495
Total first six months 1927	5,232,366	4,409,580	4,837,581	4,420,560	4,762,127	4,612,620	28,274,834
Total first six months 1926	3,023,877	2,820,608	3,034,683	2,842,050	3,208,721	2,849,970	17,779,409

phur Co.'s No. 1 Gulf Land-Pure lease, northwest and further out from the dome from the first well, missed the 6,000-foot sand but has drilled to 8,324 feet where it is in sand showing oil topped at 8,316 feet. Testing has been delaying because while operators were reaming to set casing 61 fourbles of drill stem were twisted off.

Development of Iowa Pool

At Iowa, on the Calcasieu Parish-Jefferson Davis Parish line, where first production was found during 1931 by Magnolia Petroleum Co.'s No. 1 Waite in a sand at 6,971 feet, two additional good producers were completed this year in Shell Petroleum Corp.'s No. 2 Heyd and No. 1 Fontenot, the former offsetting the discovery well to the south and the latter to the east. The field, a geophysical discovery, is owned by the above two companies.

A new productive spot in a shallower sand at 3,186 feet was opened on the north flank of the Port Barre Dome, St. Landry Parish, Louisiana, by Gulf Refining Co.'s No. 1 Wilson & Cockran, flowing 800 bbls. daily. This well was 1,200 feet east around the dome from production, previously confined to the exterme northwest flank and in sands from 3,400 to 3,600 feet. One additional well has been completed as an offset and a third test now is drilling.

The Texas Company completed a second producer at its new Manvel Field, northern Brazoria County, in No. 2 Belcher, located some 1,800 feet to the southeast of the discovery well (No. 1 Belcher), brought in during 1931 in sand at a total depth of 5,494 feet. The second well, however, failed to hold up and has been abandoned although casing has been left in the hole, which later may be deepened in exploration of lower sands. A third test, northwest of the discovery well, now is drilling.

Sub-Salt Sands

Continued development of subsalt sands featured active operations at Barbers Hill, which has consistently been one of the most attractive spots on the Gulf Coast since the opening of deep flank sands in 1928. The bulk of the operations were centered along the east and northeast sides of the dome, where drilling kept spreading closer and closer into the center of the dome and higher up on the sands formerly encountered at much lower levels in earlier development around the edge of the dome. The drilling was rewarded by a succession of good wells. An effort to drill through salt on an inside location on the extreme south side of the dome was made by Mills Bennett Production Co. in its No. 1-B Gulf fee but this resulted in failure temporarily with the abandonment of this test at a total depth of 6,831 feet still in the salt topped at 1,706 feet. In this a total of 5,125 feet of salt was drilled, the greatest amount of salt ever drilled.

Speaking of development of subsalt sands at Barbers Hill, which has been the only dome to date at which any important production has been found underlying salt and one of the few domes at which the existence of a salt overhang has been found to exist so far, Lake Barre Dome of Terrebonne Parish, Louisiana, early in July was proved productive underlying salt by the completion of The Texas Company's No. 14 State, flowing 2,000 bbls. daily from sand at 3,759-65 feet after drilling through an overhang at 2,370-2,424 feet. This leads the way for closer-in drilling at Lake Barre and future exploration of subsalt sands there. Further evidence of the existence of an overhang at Hull also has been given this year with several wells going through fingers of salt, particularly Republic Production Co.'s No. 51-A Dolbear, which penetrated salt from 1,253-1,665 feet. No production, however, was found, and this well was deepened to 2,263 feet where it went into salt again and was abandoned.

On the southwest flank of Hull, a small drilling play has been in progress for several months with the development of a little Oligocene sand sector around 4,300 to 4,700 feet. Several wells have been drilled in that particular area despite the fact that Hull has been considered pretty well proved up and where there has been no drilling activity for several years.

A $20,000,000 Deal

The Rabbs Ridge Field of Fort Bend County, opened in June, 1930, and in which steady and fairly active development and substantial expansion of productive territory have taken place, figured in the big news on the Gulf Coast this year with the purchase by Humble Oil & Refining Co. of Cullen & West's half interest in the field for a consideration of $20,000,000 of which $3,000,000 was in cash. Gulf Production Co. holds the other undivided half interest.

The field already has been proved as one of the largest in area on the Gulf Coast and so far its limits have not been defined except possibly on the extreme south where one small well has made considerable water. The Oligocene horizon around 5,200-5,300 feet, which has been found fairly uniform throughout the area, has proved itself unusually prolific and consistent. Promise of another 1,800-foot northward extension, placing The Texas Company and several others into the play, has been given by the finding of the sand in The Texas Company's No. 1 Wolters, which as this is written, is standing cemented at a total depth of 5,251 feet. The field already is over 2 miles long north and south and so far has been confined to the joint holdings of Humble and Gulf. Following the purchase by Humble, the Humble Pipe Line Co. extended its Sugarland line to Rabbs Ridge, giving the field two pipe line outlets, the other being the Gulf Pipe Line Co.

High Island Gets an Outlet

An active development of the High Island Dome also was started this year as an outcome of the purchase during 1931 by Yount Lee Oil Co. of the holdings of Gulf Production Co. and Marrs McLean in that area. Since then Yount Lee Oil Co. has laid a pipe line from the field to his terminal at Beaumont, a distance of 45 miles, and has been keeping five rigs active, building up a substantial production. Although one of the older fields on the Coast, High Island never had had a pipe line outlet and development had been carried on only in a routine way and had not resulted in any important production. Yount Lee Oil Co.'s efforts have been rewarded by a succession of good wells.

At Esperson, Liberty County, the Cranfill-Reynolds Co. uncovered a new production in an Oligocene sand found in its No. 4 Davis at 4,084-4,124 feet. Previous production in that field had been in shallower sands in the Miocene. Deeper sands have been found in deep tests drilled there but no commercial production developed in those horizons. The Davis well was a former shallow well deepened. It came in flowing at the rate of 300 bbls. daily. Several other former wells are being drilled to the new sand.

Edwin Jones created considerable interest at Refugio when he drilled his No. 2-B Mitchell, a former 5,500-foot producer on the south side of the field, to a total depth of 9,124 feet and found a sand showing oil. On testing, however, this well flowed fresh water and now has been plugged back 15 feet for another test.

In Victoria County

In the McFaddin district in southwestern Victoria County and northern Refugio County, there were no additional important developments, except the completion by T. B. Slick estate of a second high pressure gas well on its large block at the north end of the district. This well, located 3,500 feet northwest of No. 1 McFaddin (the first well) passed up the sand at 3,500 feet, in which the first well was completed as a gas well in 1931, as well as a second gas sand at 3,941-44 feet, and set on a sand at 4,485-94 feet. It was completed and estimated good for 40,000,000 feet of gas, 1,300 pounds pressure. The Texas Company, whose No. 3 McFaddin was completed New Year's Day as the discovery oil producer on the Victoria County side in a sand at 5,835 feet, since has proved a little disappointing by making considerable water. It flowed initially at the rate of 600 bbls. daily. Humble Oil & Refining Co.'s No. 1 O'Connor, discovery oil well of the district and about 3 miles south of The Texas Company's well across the line in Refugio County, also proved disappointing and now is being deepened from its oil-producing horizon at 4,155 feet. Humble also is drilling a second well, both of which now are down below 5,650 feet. The Texas Company started another well on its block following the completion of No. 3 McFaddin, but because of heavy gas pressures has not been able to go below 2,840 feet and has been delayed with fishing jobs which have been complicated by efforts to fight the gas. Acreage purchases in that area included the acquisition by Humble of the Van A. Pettys block and the acquisition by Magnolia Petroleum Co. of 3,000 acres adjoining the Slick estate block. The district is made up of large ranch ownerships, held in large blocks by major companies, which has forestalled any competitive drilling there.

Additional Gas

In southeastern Victoria County, Bunte and associates proved up an additional gas area late in January by the completion of its No. 1 Keeran Ranch, a wildcat in the Martin DeLeon Survey, some 20 miles from the McFaddin district. This well was completed at a total depth of 5,191 feet making 40,000,000 feet of gas daily with a spray of light gravity oil, and having a pressure of 2,000 pounds. A second well, located only 200 feet east of the first, missed the sand and now is drilling below 5,700 feet. In the same part of the county and on the same ranch three other deep tests are drilling, each on a large block and at considerable distances apart.

GULF COAST

Texas

Summary of Field Operations

Field—	*Comp.	Prod.	Abd.	Gas
Barbers Hill	36	36,355	3	0
Batson	4	78	0	0
Big Creek	1	0	1	0
Blue Ridge	4	2,525	1	0
Boling	2	0	2	0
Brenham	1	0	1	0
Conroe	6	2,400	3	1
Damon Mound	4	0	4	0
Esperson	2	575	0	0
Fannett	6	0	6	0
Goose Creek	2	20	0	0
Hankamer	1	1,500	0	0
High Island	7	4,507	1	0
Hull	8	1,440	2	0
Humble	23	2,051	7	1
Liberty	1	30	0	0
Lost Lake	3	850	1	0
Manvel	3	1,290	1	0
Markham	12	1,105	9	1
Moss Bluff	11	0	11	0
Mykawa	2	480	0	0
Nash	1	0	1	0
Orange	1	40	0	0
Orchard	2	2,300	0	0
Pierce Junction	20	5,875	8	0
Port Neches	4	1,990	1	0
Rabbs Ridge	13	15,485	3	0
Raccoon Bend	1	0	1	0
Refugio	21	1,053	3	3
Rockland	3	50	1	0
Saratoga	16	315	5	0
Miscellaneous	48	700	45	1
Total first 6 mo. 1932	269	83,014	131	7
Total first 6 mo. 1931	380	103,475	160	14
Difference	111	20,461	39	7
Louisiana				
Bayou Blue	1	0	1	0
Choctaw	1	0	1	0
Edgerly	3	50	1	0
Gueydan	2	1,395	0	0
Hackberry (East)	19	22,330	3	0
Hackberry (Old)	3	0	3	0
Iowa	2	1,325	0	0
Jennings	6	4	5	0
Lake Barre	4	8,200	0	0
Lake Felto	1	0	1	0
Lake Washington	2	7,200	1	0
Leesville	4	3,200	1	0
Lockport	3	1,000	1	1
Port Barre	4	2,955	1	0
Starks	3	55	0	0
Sulphur	3	4,000	1	0
Sweet Lake	1	0	1	0
Vinton	6	1,310	2	0
Miscellaneous	23	0	23	0
Total first 6 mo. 1932	91	53,054	46	1
Total first 6 mo. 1931	126	25,522	64	3
Difference	35	27,532	18	2
Total Gulf Coast, 1932	360	136,068	167	8
First 6 mo. 1931	506	128,997	224	17
Difference	146	7,071	57	9

*Includes wells deepened to or completed in horizons different from original completion depth.

Completions by Months

Month—	Comp.	Prod.	Abd.	Gas
January	50	31,429	18	3
February	62	23,203	38	0
March	43	12,407	18	0
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Total	360	136,068	167	8

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Reports from the international oil conference in Paris are optimistic, indicating that something definite will be accomplished toward the stabilization of oil markets outside of the United States. They have stated that the large international oil companies for the first time are acting as a unit and will continue to do so.

MAMMOTH EQUIPMENT NOW USED AT REFINERIES

Bubble tower as it arrived at Bayonne, N. J., refinery of the Tide Water Oil Co.

Kentucky and Michigan Fields Had Good Half Year but Central West Area Was Dull

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

The Central West Field showed a heavy decrease in operations for the first half of 1932, when compared with the same period of 1931, there being 126 fewer completions, 296 bbls. less production of crude, 45 fewer dry holes, 62 fewer gas wells, a drop of 19 in oil wells and 153 fewer wells abandoned. This covers the four divisions of the Central West Field, Lima, Central Ohio, Indiana and Illinois Fields.

The Illinois fields are going back rapidly, as only 18 completions were reported for the half year, and accounted for only 50 bbls. in new production. Central Ohio, with its 198 completions, leads all divisions by a large number, due not alone to the hunt for oil, but for natural gas, with Stark County leading with 52 completions, of which 50 are gas wells.

Indiana shows a drop in completions, but a nice increase in oil production, with Gibson County showing a greater volume of new oil and gas production than any other county in the state.

The best completion in the old Lima Field was late in June, when a 150-bbl. well was found in the Cygnet Field, in Wood County, the largest found in the Lima Field for a number of years, and the oil was found deep down in the Trenton Rock.

Following is the tabulated record of field operations in the Lima, Central Ohio, Indiana and Illinois Fields during the first half of 1932:

SUMMARY, CENTRAL WEST

Field Operations for the First Half of 1932 in Four Divisions

Field—	Comp.	Prod.	Dry	Gas	Abd.
Lima	56	619	11	24	284
Central Ohio	198	868	63	95	0
Indiana	73	1,462	30	25	8
Illinois	18	50	10	2	131
First half 1932	345	2,999	114	146	327
First half 1931	471	3,295	159	208	480
Difference	126	296	45	62	153

LIMA FIELD

Summary of Wells Completed in First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	6	18	1	3	32
February	8	7	2	3	47
March	10	110	2	4	20
April	6	215	0	3	31
May	15	57	5	6	30
June	11	212	1	5	24
First half 1932	56	619	11	24	184
First half 1931	70	453	15	41	358
Difference	14	166	4	17	174

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Wood	1	150	0	0	91
Hancock	1	6	1	0	21
Allen	1	10	0	0	12
Auglaize	0	0	0	0	6
Sandusky	1	0	1	0	40
Lucas	6	80	2	0	6
Ottawa	0	0	0	0	8
Seneca	24	337	2	17	0
Wyandot	11	18	2	4	0
Hardin	5	23	0	1	0
Shelby	2	1	1	0	0
Logan	2	0	1	1	6
Putnam	1	0	1	0	0
Darke	1	0	0	1	0
First half 1932	56	619	11	24	184

CENTRAL OHIO

Summary of Wells Completed First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	45	266	9	24
February	35	160	14	17
March	39	155	17	14
April	29	68	8	17
May	29	112	8	15
June	21	107	7	8
First half 1932	198	868	63	95
First half 1931	286	1,698	85	142
Difference	88	830	22	47

Summary by Counties

County—	Comp.	Prod.	Dry	Gas
Ashland	6	0	4	2
Medina	44	527	22	1
Lorain	9	0	3	6
Holmes	4	13	0	2
Cuyahoga	2	0	1	1
Richland	3	0	3	0
Knox	1	0	1	0
Coshocton	4	50	1	2
Summitt	4	0	1	3
Licking	15	76	4	4
Athens	11	19	5	5
Muskingum	11	35	5	4
Tuscarawas	4	73	1	1
Stark	52	0	2	50
Fairfield	6	0	2	4
Guernsey	10	72	3	4
Belmont	8	0	3	5
Carroll	2	2	1	0
Lawrence	1	0	0	1
Columbia	1	0	1	0
First half 1932	198	868	63	95

INDIANA FIELD

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	17	180	5	9	1
February	11	155	6	3	0
March	10	240	7	1	1
April	14	255	7	5	1
May	12	322	5	2	5
June	11	310	4	3	0
First half 1932	75	1,462	34	23	8
First half 1931	89	1,075	43	24	44
Difference	14	387	9	1	36

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Gibson	15	1,100	3	4	6
Pike	9	210	1	4	2
Daviess	2	0	1	1	0
Sullivan	8	0	4	4	0
Spencer	5	30	3	0	6
Knox	2	12	1	0	0
Perry	8	110	5	0	0
Henry	1	0	0	1	6
Clay	1	0	1	0	0
Switzerland	4	0	0	4	0
Laporte	1	0	1	0	0
Harrison	1	0	1	0	0
Huntington	1	0	0	1	6
Hancock	2	0	1	1	0
Hendricks	2	0	2	0	0
Shelby	1	0	1	0	0
Floyd	1	0	1	0	0
Franklin	4	0	4	0	0
Ripley	2	0	2	0	0
Johnson	2	0	0	2	0
Rush	1	0	0	1	0
Dubois	1	0	1	0	0
Union	1	0	1	0	0
First half 1932	75	1,462	34	23	8

ILLINOIS FIELD

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	6	3	5	1	26
February	2	10	1	0	13
March	3	15	1	1	4
April	4	0	4	0	57
May	3	22	1	0	19
June	0	0	0	0	12
First half 1932	18	50	10	2	131
First half 1931	36	69	16	1	78
Difference	8	19	6	1	53

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Clark	1	2	0	0	31
Crawford	8	48	2	0	17
Lawrence	1	0	1	0	50
St. Clair	3	0	3	0	29
Monroe	1	0	1	0	0
Bond	2	0	0	2	0
Wabash	0	0	0	0	4
Montgomery	1	0	1	0	0
Madison	1	0	1	0	0
First half 1932	18	50	10	2	131

Kentucky

The Kentucky fields had a profitable year, taken as a whole, as operating costs are low in this State of shallow fields, and crude oil brought high enough prices to put oil men "in the black" on an average.

Hart County was the leader in the first half of the year with 74 completions of which 60 were oil wells with an initial production averaging 77.36 bbls. per well. Fourteen gas wells were completed in the county and 10 wells were dry.

The last half of the year is expected to be fairly busy. It is noticeable that notwithstanding the tremendous slump in drilling in the country generally, completions in Kentucky were only 41 fewer than in the same period in 1931, a drop of less than 17 per cent, while the number of oil wells drilled in the first half of this year was 23 per cent greater than in the first half of last year, altogether a very creditable and profitable showing for a state where oil may be found at depths ranging from 350 to 800 feet.

KENTUCKY FIELDS

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	30	1,122	9	3
February	19	540	5	4
March	41	888	7	12
April	48	1,460	15	9
May	37	1,435	13	5
June	42	1,068	13	2
First half 1932	217	6,513	62	35
First half 1931	258	7,853	88	73
Difference	41	1,340	26	38

Completions by Counties

County—	Comp.	Prod.	Dry	Gas
Ohio	30	741	8	0
Daviess	48	1,124	19	1
Hancock	11	31	6	2
Henderson	6	117	1	0
McLean	15	467	10	0
Hart	74	3,868	10	14
Webster	7	0	0	7
Muhlenberg	8	30	5	1
Hopkins	2	0	2	0
Christian	3	0	0	3
Barren	1	30	0	0
Cumberland	3	50	0	2
Edmonson	3	55	0	0
Grayson	3	0	1	2
Knox	3	3	0	3
Total	217	6,513	62	35

Michigan Fields

The Central Michigan Field attracted wide attention on account of the large producers found in the Mount Pleasant Field, in the Dundee formation, the pay being around 3,500 feet. Operators, to a large extent, found wells far above the average of any other area east of the Mississippi River. In January, the Talbot Oil Co. landed the first big well of 1932, No. 3 Frank Adams farm, Section 10, Greendale Township, Midland County, with an initial of 1,000 bbls. at 3,505 feet, and James A. McKay brought in a 2,000,000-foot gas well on the Bicknell lease, Grant Township, Clare County, at 1,408 feet. In March a 1,000-bbl. well was struck by W. L. McClanahan, Inc. in No. 3 Struble farm, Section 10, Greendale Township. Pure Oil Co. completed a 1,000-bbl. well in No. 2-B Bernard, same section, also No. 1 Lilly farm, Section 18, which showed 1,000 bbls. In Greendale Township, Midland County, the big noise was made in April with a number of large wells. Among them were the Pure Oil Co.'s Nos. 1 and 2 Emma Reed farm, Section 10, doing an initial of 3,000 and 2,000 bbls. respectively. No. 1 Charles Mullett, Section 15, produced an initial of 3,140 bbls., W. L. McClanahan, Inc.'s No. 4 Morrison, Section 10, produced initially better than 3,000 bbls., and No. 4 Struble, Section 10, 700 bbls. Talbot Oil Co.'s No. 1-C State of Michigan land showed an initial of 3,600 bbls. In May a series of large wells were found in Greendale Township, Midland County, the largest being W. L. McClanahan, Inc.'s No. 2 Morrison, with 3,600 bbls. and No. 2, same farm, 1,200 bbls. Talbot Oil Co.'s No. 2-C on State of Michigan land, had an initial of 2,700 bbls., and the Pure Oil Co.'s No. 2-A Iosco land, 1,400 bbls. initial at 3,554 feet. In June Braden-Saunders Co. hit a 1,000-bbl. producer on the Kate Stapleton farm, Section 12, Greendale, and a very important find to the southeast of the East Pool, the richest oil pool found in any part of Michigan.

More than 20 strings of tools are working in the Greendale Township of Midland County and many new drilling permits are being secured from the conservation department at Lansing, and the latter half of the year should show more activity than the first six months showed.

The production of the Central Michigan Field is rated close around 20,000 bbls. a day, and holding up remarkably. There is also a vast amount of gas in the field, and it has been said recently that there is approximately 10,000,000 feet going to waste in the rich East Pool in Midland County, to say nothing of what is being wasted in the Vernon Field in Isabella County, where some very good oil wells have been completed.

Another gas field is that in Clare County, and still another in Bloomfield Township, Isabella County, and it appears that there is a sufficient volume to take care of numerous cities. Detroit is anxious for natural gas and the city has it just in its back door. The only drawback appears to be that only 25 per cent can be taken, holding back the balance for the future. There is some talk of the laying of a gas line from the Mount Pleasant Field to Muskegon, and also rumors that Bay City, Saginaw and other large towns and villages are after the product, but are slow in doing anything.

MICHIGAN FIELDS

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	9	1,035	2	5
February	7	20	5	1
March	8	4,915	4	0
April	16	18,295	5	1
May	14	12,495	3	0
June	12	5,795	3	0
Total first half 1932	66	41,635	22	7
Total first half 1931	49	2,902	23	10
Difference	17	38,733	1	3

Summary by Counties

County—	Comp.	Prod.	Dry	Gas
Isabella	4	420	0	1
Midland	44	41,225	11	0
Clare	4	0	2	2
Muskingum	3	0	2	1
Allegan	2	0	0	2
Mecosta	1	0	1	0
Macomb	1	0	0	1
Monroe	1	0	1	0
Lenawee	1	0	1	0
Washtenaw	1	0	1	0
Ogemaw	1	10	0	0
Livingston	1	0	1	0
Newaygo	1	0	1	0
Huron	1	0	1	0
Total first half 1932	66	41,655	22	7

Drilling in Albania Now Centered in Devoll Field

The Italians (A.I.P.A.) have decided to concentrate entirely on the Devoll Field in Albania. All their other tests (Selevec, near Valona, and Rio ottimo, near Selenica) are abandoned for the present. In the Devoll Field, so far, at least 13 wells have been put down and have shown that the extent of the proved deposit is about 25 square kilometers. Seven wells are already classed as productive; but at present production in excess of the requirements of the drilling outfits is not aimed at by the company, as a means of transport must first be provided and further knowledge is necessary as to the productive possibilities of the field. The oil is of a similar quality throughout the various tests, and comes from a horizon in the partly brackish upper Miocene. The Italians, who are advised by Dr. S. Zuber, are optimistic as to the result of further drilling.

Besides these Italian tests in the Devoll Field there is only one other well drilling, that near Kota, 20 kilometers southeast of Valona, which is being put down by the Franco-Albanian Co. This has already reached 1,300 meters and is now in the Flysch, with no production so far.

phur Co.'s No. 1 Gulf Land-Pure lease, northwest and further out from the dome from the first well, missed the 6,000-foot sand but has drilled to 8,324 feet where it is in sand showing oil topped at 8,316 feet. Testing has been delaying because while operators were reaming to set casing 61 fourbles of drill stem were twisted off.

Development of Iowa Pool

At Iowa, on the Calcasieu Parish-Jefferson Davis Parish line, where first production was found during 1931 by Magnolia Petroleum Co.'s No. 1 Waite in a sand at 6,971 feet, two additional good producers were completed this year in Shell Petroleum Corp.'s No. 2 Heyd and No. 1 Fontenot, the former offsetting the discovery well to the south and the latter to the east. The field, a geophysical discovery, is owned by the above two companies.

A new productive spot in a shallower sand at 3,186 feet was opened on the north flank of the Port Barre Dome, St. Landry Parish, Louisiana, by Gulf Refining Co.'s No. 1 Wilson & Cockran, flowing 800 bbls. daily. This well was 1,200 feet east around the dome from production, previously confined to the exterme northwest flank and in sands from 3,400 to 3,600 feet. One additional well has been completed as an offset and a third test now is drilling.

The Texas Company completed a second producer at its new Manvel Field, northern Brazoria County, in No. 2 Belcher, located some 1,800 feet to the southeast of the discovery well (No. 1 Belcher), brought in during 1931 in sand at a total depth of 5,494 feet. The second well, however, failed to hold up and has been abandoned although casing has been left in the hole, which later may be deepened in exploration of lower sands. A third test, northwest of the discovery well, now is drilling.

Sub-Salt Sands

Continued development of subsalt sands featured active operations at Barbers Hill, which has consistently been one of the most attractive spots on the Gulf Coast since the opening of deep flank sands in 1928. The bulk of the operations were centered along the east and northeast sides of the dome, where drilling kept spreading closer and closer into the center of the dome and higher up on the sands formerly encountered at much lower levels in earlier development around the edge of the dome. The drilling was rewarded by a succession of good wells. An effort to drill through salt on an inside location on the extreme south side of the dome was made by Mills Bennett Production Co. in its No. 1-B Gulf fee but this resulted in failure temporarily with the abandonment of this test at a total depth of 6,831 feet still in the salt topped at 1,706 feet. In this a total of 5,125 feet of salt was drilled, the greatest amount of salt ever drilled.

Speaking of development of subsalt sands at Barbers Hill, which has been the only dome to date at which any important production has been found underlying salt and one of the few domes at which the existence of a salt overhang has been found to exist so far, Lake Barre Dome of Terrebonne Parish, Louisiana, early in July was proved productive underlying salt by the completion of The Texas Company's No. 14 State, flowing 2,000 bbls. daily from sand at 3,759-65 feet after drilling through an overhang at 2,370-2,424 feet. This leads the way for closer-in drilling at Lake Barre and future exploration of subsalt sands there. Further evidence of the existence of an overhang at Hull also has been given this year with several wells going through fingers of salt, particularly Republic Production Co.'s No. 51-A Dolbear, which penetrated salt from 1,253-1,665 feet. No production, however, was found, and this well was deepened to 2,263 feet where it went into salt again and was abandoned.

On the southwest flank of Hull, a small drilling play has been in progress for several months with the development of a little Oligocene sand sector around 4,300 to 4,700 feet. Several wells have been drilled in that particular area despite the fact that Hull has been considered pretty well proved up and where there has been no drilling activity for several years.

A $20,000,000 Deal

The Rabbs Ridge Field of Fort Bend County, opened in June, 1930, and in which steady and fairly active development and substantial expansion of productive territory have taken place, figured in the big news on the Gulf Coast this year with the purchase by Humble Oil & Refining Co. of Cullen & West's half interest in the field for a consideration of $20,000,000 of which $3,000,000 was in cash. Gulf Production Co. holds the other undivided half interest.

The field already has been proved as one of the largest in area on the Gulf Coast and so far its limits have not been defined except possibly on the extreme south where one small well has made considerable water. The Oligocene horizon around 5,200-5,300 feet, which has been found fairly uniform throughout the area, has proved itself unusually prolific and consistent. Promise of another 1,800-foot northward extension, placing The Texas Company and several others into the play, has been given by the finding of the sand in The Texas Company's No. 1 Wolters, which as this is written, is standing cemented at a total depth of 5,251 feet. The field already is over 2 miles long north and south and so far has been confined to the joint holdings of Humble and Gulf. Following the purchase by Humble, the Humble Pipe Line Co. extended its Sugarland line to Rabbs Ridge, giving the field two pipe line outlets, the other being the Gulf Pipe Line Co.

High Island Gets an Outlet

An active development of the High Island Dome also was started this year as an outcome of the purchase during 1931 by Yount Lee Oil Co. of the holdings of Gulf Production Co. and Marrs McLean in that area. Since then Yount Lee Oil Co. has laid a pipe line from the field to his terminal at Beaumont, a distance of 45 miles, and has been keeping five rigs active, building up a substantial production. Although one of the older fields on the Coast, High Island never had had a pipe line outlet and development had been carried on only in a routine way and had not resulted in any important production. Yount Lee Oil Co.'s efforts have been rewarded by a succession of good wells.

At Esperson, Liberty County, the Cranfill-Reynolds Co. uncovered a new production in an Oligocene sand found in its No. 4 Davis at 4,084-4,124 feet. Previous production in that field had been in shallower sands in the Miocene. Deeper sands have been found in deep tests drilled there but no commercial production developed in those horizons. The Davis well was a former shallow well deepened. It came in flowing at the rate of 300 bbls. daily. Several other former wells are being drilled to the new sand.

Edwin Jones created considerable interest at Refugio when he drilled his No. 2-B Mitchell, a former 5,500-foot producer on the south side of the field, to a total depth of 9,124 feet and found a sand showing oil. On testing, however, this well flowed fresh water and now has been plugged back 15 feet for another test.

In Victoria County

In the McFaddin district in southwestern Victoria County and northern Refugio County, there were no additional important developments, except the completion by T. B. Slick estate of a second high pressure gas well on its large block at the north end of the district. This well, located 3,500 feet northwest of No. 1 McFaddin (the first well) passed up the sand at 3,500 feet, in which the first well was completed as a gas well in 1931, as well as a second gas sand at 3,941-44 feet, and set on a sand at 4,485-94 feet. It was completed and estimated good for 40,000,000 feet of gas, 1,300 pounds pressure. The Texas Company, whose No. 3 McFaddin was completed New Year's Day as the discovery oil producer on the Victoria County side in a sand at 5,835 feet, since has proved a little disappointing by making considerable water. It flowed initially at the rate of 600 bbls. daily. Humble Oil & Refining Co.'s No. 1 O'Connor, discovery oil well of the district and about 3 miles south of The Texas Company's well across the line in Refugio County, also proved disappointing and now is being deepened from its oil-producing horizon at 4,155 feet. Humble also is drilling a second well, both of which now are down below 5,650 feet. The Texas Company started another well on its block following the completion of No. 3 McFaddin, but because of heavy gas pressures has not been able to go below 2,840 feet and has been delayed with fishing jobs which have been complicated by efforts to fight the gas. Acreage purchases in that area included the acquisition by Humble of the Van A. Pettys block and the acquisition by Magnolia Petroleum Co. of 3,000 acres adjoining the Slick estate block. The district is made up of large ranch ownerships, held in large blocks by major companies, which has forestalled any competitive drilling there.

Additional Gas

In southeastern Victoria County, Bunte and associates proved up an additional gas area late in January by the completion of its No. 1 Keeran Ranch, a wildcat in the Martin DeLeon Survey, some 20 miles from the McFaddin district. This well was completed at a total depth of 5,191 feet making 40,000,000 feet of gas daily with a spray of light gravity oil, and having a pressure of 2,000 pounds. A second well, located only 200 feet east of the first, missed the sand and now is drilling below 5,700 feet. In the same part of the county and on the same ranch three other deep tests are drilling, each on a large block and at considerable distances apart.

GULF COAST

Texas

Summary of Field Operations

Field—	*Comp.	Prod.	Abd.	Gas
Barbers Hill	36	36,355	3	0
Batson	4	78	0	0
Big Creek	1	0	1	0
Blue Ridge	4	2,525	1	0
Boling	2	0	2	0
Brenham	1	0	1	0
Conroe	6	2,400	3	1
Damon Mound	4	0	4	0
Esperson	2	575	0	0
Fannett	6	0	6	0
Goose Creek	2	20	0	0
Hankamer	1	1,500	0	0
High Island	7	4,507	1	0
Hull	8	1,440	2	0
Humble	23	2,051	7	1
Liberty	1	30	0	0
Lost Lake	3	850	1	0
Manvel	3	1,290	1	0
Markham	12	1,105	9	1
Moss Bluff	11	0	11	0
Mykawa	2	480	0	0
Nash	1	0	1	0
Orange	1	40	0	0
Orchard	2	2,300	0	0
Pierce Junction	20	5,875	8	0
Port Neches	4	1,990	1	0
Rabbs Ridge	13	15,485	3	0
Raccoon Bend	1	0	1	0
Refugio	21	1,053	5	3
Rockland	3	50	1	0
Saratoga	16	315	5	9
Miscellaneous	48	700	45	1
Total first 6 mo. 1932	269	83,014	131	7
Total first 6 mo. 1931	380	103,475	160	14
Difference	111	20,461	39	7

Louisiana

Bayou Blue	1	0	1	0
Choctaw	1	0	1	0
Edgerly	3	80	1	0
Gueydan	2	1,395	0	0
Hackberry (East)	19	22,330	3	0
Hackberry (Old)	3	0	3	0
Iowa	2	1,325	0	0
Jennings	6	4	5	0
Lake Barre	4	8,200	0	6
Lake Felto	1	0	1	0
Lake Washington	2	7,200	1	0
Leesville	4	3,200	1	0
Lockport	3	1,000	1	1
Port Barre	4	2,955	1	0
Starks	3	55	0	0
Sulphur	3	4,000	1	0
Sweet Lake	1	0	1	0
Vinton	6	1,310	2	0
Miscellaneous	23	0	23	0
Total first 6 mo. 1932	91	53,054	46	1
Total first 6 mo. 1931	126	25,522	64	3
Difference	35	27,532	18	2
Total Gulf Coast, 1932	360	136,068	167	8
First 6 mo. 1931	506	128,997	224	17
Difference	146	7,071	57	9

*Includes wells deepened to or completed in horizons different from original completion depth.

Completions by Months

Month—	Comp.	Prod.	Abd.	Gas
January	50	31,429	18	3
February	62	23,203	38	0
March	43	12,407	18	0
April	64	26,220	28	2
May	75	26,664	32	1
June	66	16,145	33	2
Total	360	136,068	167	8

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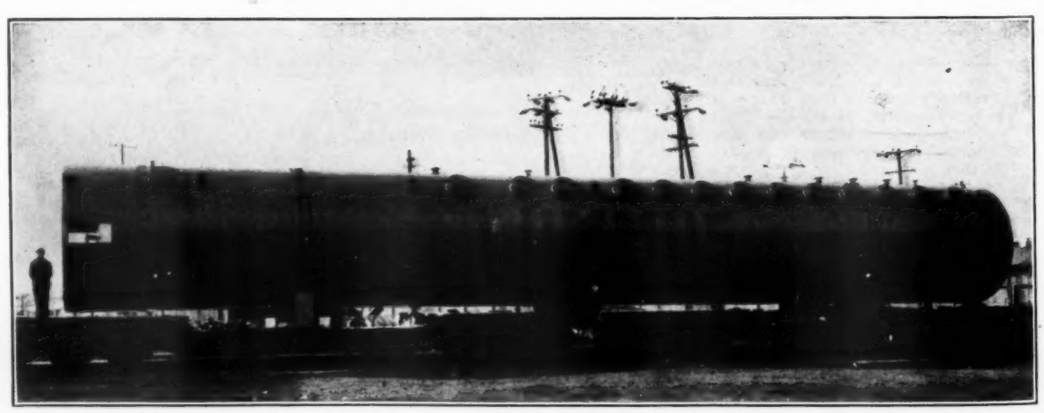

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Staff Correspondent, Central West Fields

The Central West Field showed a heavy decrease in operations for the first half of 1932, when compared with the same period of 1931, there being 126 fewer completions, 296 bbls. less production of crude, 45 fewer dry holes, 62 fewer gas wells, a drop of 19 in oil wells and 153 fewer wells abandoned. This covers the four divisions of the Central West Field, Lima, Central Ohio, Indiana and Illinois Fields.

The Illinois fields are going back rapidly, as only 18 completions were reported for the half year, and accounted for only 50 bbls. in new production. Central Ohio, with its 198 completions, leads all divisions by a large number, due not alone to the hunt for oil, but for natural gas, with Stark County leading with 52 completions, of which 50 are gas wells.

Indiana shows a drop in completions, but a nice increase in oil production, with Gibson County showing a greater volume of new oil and gas production than any other county in the state.

The best completion in the old Lima Field was late in June, when a 150-bbl. well was found in the Cygnet Field, in Wood County, the largest found in the Lima Field for a number of years, and the oil was found deep down in the Trenton Rock.

Following is the tabulated record of field operations in the Lima, Central Ohio, Indiana and Illinois Fields during the first half of 1932:

SUMMARY, CENTRAL WEST

Field Operations for the First Half of 1932 in Four Divisions

Field—	Comp.	Prod.	Dry	Gas	Abd.
Lima	56	619	11	24	284
Central Ohio	198	868	63	95	0
Indiana	73	1,462	30	25	8
Illinois	18	50	10	2	131
First half 1932	345	2,999	114	146	327
First half 1931	471	3,295	159	208	480
Difference	126	296	45	62	153

LIMA FIELD

Summary of Wells Completed in First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	6	18	1	3	32
February	8	7	2	3	47
March	10	110	2	4	20
April	6	215	0	3	31
May	15	57	5	6	30
June	11	212	1	5	24
First half 1932	56	619	11	24	184
First half 1931	70	453	15	41	358
Difference	14	166	4	17	174

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Wood	1	150	0	0	91
Hancock	1	6	1	0	21
Allen	1	10	0	0	12
Auglaize	0	0	0	0	6
Sandusky	1	0	1	0	40
Lucas	6	80	2	0	6
Ottawa	0	0	0	0	8
Seneca	24	337	2	17	0
Wyandot	11	18	2	4	0
Hardin	5	23	0	1	0
Shelby	2	1	1	0	0
Logan	2	6	1	1	0
Putnam	1	6	1	0	0
Darke	1	0	0	1	6
First half 1932	56	619	11	24	184

CENTRAL OHIO

Summary of Wells Completed First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	45	266	9	24
February	35	160	14	17
March	39	155	17	14
April	29	68	8	17
May	29	112	8	15
June	21	107	7	8
First half 1932	198	868	63	95
First half 1931	286	1,698	85	142
Difference	88	830	22	47

Summary by Counties

County—	Comp.	Prod.	Dry	Gas
Ashland	6	0	4	2
Medina	44	527	22	1
Lorain	9	0	3	6
Holmes	4	13	0	2
Cuyahoga	2	0	1	1
Richland	3	0	3	0
Knox	1	0	1	0
Coshocton	4	50	1	2
Summitt	4	0	1	3
Licking	15	76	4	4
Athens	11	18	5	5
Muskingum	11	35	5	4
Tuscarawas	4	73	1	1
Stark	52	0	2	50
Fairfield	6	0	2	4
Guernsey	10	72	3	4
Belmont	8	0	3	5
Carroll	2	2	1	0
Lawrence	1	0	0	1
Columbia	1	0	1	0
First half 1932	198	868	63	95

INDIANA FIELD

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	17	180	5	9	1
February	11	155	6	3	0
March	10	240	7	1	1
April	14	255	7	5	1
May	12	322	5	2	5
June	11	310	4	3	0
First half 1932	75	1,462	34	23	8
First half 1931	89	1,075	43	24	44
Difference	14	387	9	1	36

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Gibson	15	1,100	3	4	6
Pike	9	210	1	4	2
Daviess	2	0	1	1	0
Sullivan	8	0	4	4	0
Spencer	5	30	3	0	0
Knox	2	12	1	0	0
Perry	8	110	5	0	0
Henry	1	0	0	1	0
Clay	1	0	1	0	0
Switzerland	4	0	0	4	0
Laporte	1	6	1	0	0
Harrison	1	0	1	0	0
Huntington	1	0	0	1	0
Hancock	2	0	1	1	0
Hendricks	2	0	2	0	0
Shelby	1	0	1	0	0
Floyd	1	0	1	0	0
Franklin	4	0	4	0	0
Ripley	2	0	2	0	0
Johnson	2	0	0	2	0
Rush	1	0	0	1	0
Dubois	1	0	1	0	0
Union	1	0	1	0	0
First half 1932	75	1,462	34	23	8

ILLINOIS FIELD

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas	Abd.
January	6	3	3	1	26
February	2	10	1	0	13
March	3	15	1	1	4
April	4	0	4	0	57
May	3	22	1	0	19
June	0	0	0	0	12
First half 1932	18	50	10	2	131
First half 1931	26	69	16	1	78
Difference	8	19	6	1	53

Summary by Counties

County—	Comp.	Prod.	Dry	Gas	Abd.
Clark	1	2	0	0	31
Crawford	8	48	3	0	17
Lawrence	1	0	1	0	50
St. Clair	3	0	3	0	29
Monroe	1	0	1	0	0
Bond	2	0	0	2	0
Wabash	0	0	0	0	4
Montgomery	1	0	1	0	0
Madison	1	0	1	0	0
First half 1932	18	50	10	2	131

Kentucky

The Kentucky fields had a profitable year, taken as a whole, as operating costs are low in this State of shallow fields, and crude oil brought high enough prices to put oil men "in the black" on an average.

Hart County was the leader in the first half of the year with 74 completions of which 60 were oil wells with an initial production averaging 77.36 bbls. per well. Fourteen gas wells were completed in the county and 10 wells were dry.

The last half of the year is expected to be fairly busy. It is noticeable that notwithstanding the tremendous slump in drilling in the country generally, completions in Kentucky were only 41 fewer than in the same period in 1931, a drop of less than 17 per cent, while the number of oil wells drilled in the first half of this year was 23 per cent greater than in the first half of last year, altogether a very creditable and profitable showing for a state where oil may be found at depths ranging from 350 to 800 feet.

KENTUCKY FIELDS

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	30	1,122	9	3
February	19	540	5	4
March	41	888	7	12
April	48	1,460	15	9
May	37	1,435	13	5
June	42	1,068	13	2
First half 1932	217	6,513	62	35
First half 1931	258	7,853	88	73
Difference	41	1,340	26	38

Completions by Counties

County—	Comp.	Prod.	Dry	Gas
Ohio	30	741	8	6
Daviess	48	1,124	19	1
Hancock	11	31	6	2
Henderson	6	117	1	6
McLean	15	467	10	0
Hart	74	3,868	10	14
Webster	7	0	0	7
Muhlenberg	8	30	5	1
Hopkins	2	0	2	0
Christian	3	0	0	3
Barren	1	30	0	0
Cumberland	3	50	0	2
Edmonson	3	55	0	0
Grayson	3	0	1	2
Knox	3	0	0	3
Total	217	6,513	62	35

Michigan Fields

The Central Michigan Field attracted wide attention on account of the large producers found in the Mount Pleasant Field, in the Dundee formation, the pay being around 3,500 feet. Operators, to a large extent, found wells far above the average of any other area east of the Mississippi River. In January, the Talbot Oil Co. landed the first big well of 1932, No. 3 Frank Adams farm, Section 10, Greendale Township, Midland County, with an initial of 1,000 bbls. at 3,505 feet, and James A. McKay brought in a 2,000,000-foot gas well on the Bicknell lease, Grant Township, Clare County, at 1,408 feet. In March a 1,000-bbl. well was struck by W. L. McClanahan, Inc. in No. 3 Struble farm, Section 10, Greendale Township. Pure Oil Co. completed a 1,000-bbl. well in No. 2-B Bernard, same section, also No. 1 Lilly farm, Section 18, which showed 1,000 bbls. In Greendale Township, Midland County, the big noise was made in April with a number of large wells. Among them were the Pure Oil Co.'s Nos. 1 and 2 Emma Reed farm, Section 10, doing an initial of 3,000 and 2,000 bbls. respectively. No. 1 Charles Mullett, Section 15, produced an initial of 3,140 bbls., W. L. McClanahan, Inc.'s No. 4 Morrison, Section 10, produced initially better than 3,000 bbls., and No. 4 Struble, Section 10, 700 bbls. Talbot Oil Co.'s No. 1-C State of Michigan land showed an initial of 3,600 bbls. In May a series of large wells were found in Greendale Township, Midland County, the largest being W. L. McClanahan, Inc.'s No. 2 Morrison, with 3,600 bbls. and No. 2, same farm, 1,200 bbls. Talbot Oil Co.'s No. 2-C on State of Michigan land, had an initial of 2,700 bbls., and the Pure Oil Co.'s No. 2-A Iosco land, 1,400 bbls. initial at 3,554 feet. In June Braden-Saunders Co. hit a 1,000-bbl. producer on the Kate Stapleton farm, Section 12, Greendale, and a very important find to the southeast of the East Pool, the richest oil pool found in any part of Michigan.

More than 20 strings of tools are working in the Greendale Township of Midland County and many new drilling permits are being secured from the conservation department at Lansing, and the latter half of the year should show more activity than the first six months showed.

The production of the Central Michigan Field is rated close around 20,000 bbls. a day, and holding up remarkably. There is also a vast amount of gas in the field, and it has been said recently that there is approximately 10,000,000 feet going to waste in the rich East Pool in Midland County, to say nothing of what is being wasted in the Vernon Field in Isabella County, where some very good oil wells have been completed.

Another gas field is that in Clare County, and still another in Bloomfield Township, Isabella County, and it appears that there is a sufficient volume to take care of numerous cities. Detroit is anxious for natural gas and the city has it just in its back door The only drawback appears to be that only 25 per cent can be taken, holding back the balance for the future. There is some talk of the laying of a gas line from the Mount Pleasant Field to Muskegon, and also rumors that Bay City, Saginaw and other large towns and villages are after the product, but are slow in doing anything.

MICHIGAN FIELDS

Summary of Wells Completed for First Half of 1932

Month—	Comp.	Prod.	Dry	Gas
January	9	1,035	2	5
February	7	20	5	1
March	8	4,915	4	0
April	16	18,295	5	1
May	14	12,495	3	0
June	12	5,795	3	0
Total first half 1932	66	41,655	22	7
Total first half 1931	49	2,902	23	10
Difference	17	38,753	1	3

Summary by Counties

County—	Comp.	Prod.	Dry	Gas
Isabella	4	420	0	1
Midland	44	41,225	11	0
Clare	4	0	2	2
Muskingum	3	0	2	1
Allegan	2	0	0	2
Mecosta	1	0	1	0
Macomb	1	0	0	1
Monroe	1	0	1	0
Lenawee	1	0	1	0
Washtenaw	1	0	1	0
Ogemaw	1	10	0	0
Livingston	1	0	1	0
Newaygo	1	0	1	0
Huron	1	0	1	0
Total first half 1932	66	41,655	22	7

Drilling in Albania Now Centered in Devoll Field

The Italians (A.I.P.A.) have decided to concentrate entirely on the Devoll Field in Albania. All their other tests (Selevec, near Valona, and Rio ottimo, near Selenica) are abandoned for the present. In the Devoll Field, so far, at least 13 wells have been put down and have shown that the extent of the proved deposit is about 25 square kilometers. Seven wells are already classed as productive; but at present production in excess of the requirements of the drilling outfits is not aimed at by the company, as a means of transport must first be provided and further knowledge is necessary as to the productive possibilities of the field. The oil is of a similar quality throughout the various tests, and comes from a horizon in the partly brackish upper Miocene. The Italians, who are advised by Dr. S. Zuber, are optimistic as to the result of further drilling.

Besides these Italian tests in the Devoll Field there is only one other well drilling, that near Kota, 20 kilometers southeast of Valona, which is being put down by the Franco-Albanian Co. This has already reached 1,300 meters and is now in the Flysch, with no production so far.

Sharp Reduction in Exports of Refined Products Shown During First Six Months of Year

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

Intensified foreign competition, coupled with falling demand in principal world consuming countries, was responsible for a sharp decline in volume of export business on refined petroleum products by Atlantic Coast refiners during the first half of the year. While the outlook favors a slight improvement during the closing half of the year, it is evident thus early that export totals for the full year will be drastically under those for 1931 and other recent years, so far as the East Coast refining area is concerned.

The last stronghold of Atlantic Coast refiners in foreign gasoline and kerosene markets, that held by American cased products, came in for sharp competition this year, particularly from Russia, and export volume suffered correspondingly. Another factor militating against the exporter of cased products has been the growth of the refining industry abroad, as well as establishment of bulk terminals and packaging plants in many foreign countries hitherto buyers of cased products, but which have now swung over into the column of bulk cargo customers. With the United States, Russia and Rumania all competing for this business (not to mention the competition from refineries in the Caribbean area, Dutch West Indies and elsewhere) American refiners have lost considerable of this business.

Economic depression abroad, coupled with internal disturbances in many countries, notably in South America and China, have sharply cut consumption of refined products in some of the best markets served by East Coast refiners.

The tariff situation, in this country and abroad, has radically changed the market situation, from the viewpoint of the East Coast refiner and exporter. Refineries operating in the Caribbean area are placed in a most advantageous position to compete with the American Gulf and Atlantic Coast refinery areas for foreign business, and due to the lower costs enjoyed by the Caribbean refineries, it is expected that considerable business which would have reached the United States market under normal conditions will now be diverted to the Caribbean. Higher import duties on refined petroleum products have been placed in effect in many foreign consuming countries thus far in 1932 and these heavier charges, coupled with increased taxes in many countries, are tending to curtail consumption further. Currency deflation in many countries has also played an important part in curtailing demand for refined petroleum from the East Coast and other American refining areas.

Export Association

Considerable interest is still felt in export trade circles over the possibility of a revival in activity by the Export Association, which has been inactive for nearly two years. It is felt by many that this organization, in revamped form, will yet be the medium for making effective American co-operation in a world stabilization of export markets.

France

Russia and Rumania have cut sharply into American petroleum sales in France, and this has been reflected by a drop in French purchases in the East Coast and Gulf markets. In addition, France's program of refinery construction is making steady progress and from specialty petroleum products it is expected within three years France will be largely independent in the matter of refined petroleum, although necessarily continuing as an important importer of crude. Standard of New Jersey, Atlantic Refining, Gulf, Standard of New York, and Vacuum are all interested in refinery construction projects under way in France, and while these companies are expected to hold their French business, they will not continue to draw their supplies from the American East Coast and Gulf refining districts.

A COMPARISON OF EXPORTS OF REFINED PETROLEUM PRODUCTS FROM NEW YORK

(By quarters for 1932 and the previous two years)

	First quarter			Second quarter		
	1932	1931	1930	1932	1931	1930
Gallons						
Gasoline	1,075,000	2,815,000	5,269,000	729,000	2,370,000	4,109,000
Naphtha	2,754,000	4,038,000	14,732,000	2,023,000	3,240,000	7,330,000
Kerosene	928,000	1,304,000	2,552,000	444,000	903,000	2,438,000
Fuel oil	728,000	1,335,000	672,000	2,220,000	925,000	1,482,000
Lub. oil	17,676,000	19,036,000	24,107,000	13,445,000	23,867,000	21,286,000
Pet., refined	4,937,000	11,653,000	20,020,000	2,790,000	9,295,000	15,008,000
Pounds						
Petrolatum	815,000	721,000	609,000	80,000	794,000	482,000
Lub. grease	8,914,000	12,245,000	15,008,000	7,015,000	9,990,000	12,831,000
Paraffin wax	23,580,000	21,060,000	19,318,000	14,475,000	20,493,000	14,554,000
Scale	4,690,000	6,525,000	8,472,000	468,000	7,995,000	7,322,000
Refined	1,870,000	3,090,000	4,542,000	1,336,000	2,415,000	2,166,000

Germany's Oil Industry

Germany, in former years an important buyer of refined petroleum from Atlantic Coast refiners, as well as an important factor in the Gulf market, has been steadily building up her own production of crude, and has added to her refining facilities as well. As a result of these developments, as well as increased purchases from Russia, German purchases of refined products are steadily dwindling in this country.

England

The United Kingdom continues to draw stocks of refined products from the United States in large volume, and considerable of the volume of East Coast exports thus far in 1932 has gone to England.

The British home refining industry continues to operate at less than half of capacity, due to its inability to compete with low priced American and other foreign oils, and unless the Ottawa conference of Britain's dominions develops some plan whereby petroleum from British colonies will enjoy a tariff preference over other oil imports, the outlook favors continued demand for American oil for shipment to England.

Gasoline

Shipments of gasoline into export channels have fallen precipitately this year. A total of but 1,804,000 gallons was reported exported from New York during the first six months, compared with 5,185,000 gallons in the first half last year, 9,378,000 gallons in the first six months of 1930, and 13,552,000 gallons in the first six months of 1929. Practically all of these exports were of cased gasoline.

Naphtha

The decline in naphtha exports locally has been no less precipitous. Only 4,777,000 gallons were exported in the first six months of 1932, contrasted with 7,278,000 gallons in comparable months of 1931, a total of 22,052,000 gallons in the first half of 1930, and 32,512,000 gallons in the first six months of 1929. Rumanian and Russian competition has been largely responsible for this sharp decline.

Kerosene

Cased kerosene exports from New York have also shared in the general decline, only 1,372,000 gallons being exported in the first half of the year, as contrasted with exports of 2,207,000 in the first six months of 1931 and 4,990,000 gallons and 10,476,000 gallons in the first six months of 1930 and 1929, respectively. Here again, Russian and Rumanian competition coupled with falling consumption abroad, have reacted against the export gallonage of East Coast refiners.

Fuel and Gas Oil

A more cheerful picture is presented by figures covering fuel and gas oil exports from New York for the first half of the year. Total shipments were 2,948,000 gallons, an increase of 688,000 gallons over 2,260,000 gallons exported in the first six months of 1931 and greater than the 2,154,000 gallons and 2,062,000 gallons exported in the first half of 1930 and 1929, respectively.

Lub Oil

Further sharp declines in lubricating oil exports were reported for the first six months of 1932. Lub oil exports form the most important export movement locally from the standpoint of dollars and cents, and gallonage has shown steady declines in recent years. A total of 31,121,000 gallons was exported from New York in the first half of the current year, as compared with 42,953,000 gallons, 45,393,000 gallons and 51,975,000 gallons in the first six month of 1931, 1930 and 1929, respectively. While Russia has sharply increased her lub oil exports during the past few years, other American exporting areas have likewise come into sharper competition with East Coast refiners.

Refined Petroleum

A pronounced drop in gallonage has also been recorded in "refined petroleum" this year. Gasoline and kerosene, not recorded on manifests as such, make up the bulk of the oil falling under this category. New York exports for the first half of the year were but 7,727,000 gallons, against 20,948,000 gallons in the first six months last year, 35,028,000 gallons in the first half of 1930, and 43,661,000 gallons in the comparable months of 1929.

Lub Grease

Increased production and compounding of lubricating greases abroad has been largely responsible for the falling off in volume on the part of local exporters. There were 15,929,000 pounds of lubricating grease shipped into export channels out of New York in the first half of the year, compared with 22,235,000 pounds in the corresponding months last year, 27,839,000 pounds in the first half of 1930, and 30,840,000 pounds in the first six months of 1929.

Paraffin Wax

Exports of paraffin wax from New York in the first six months were somewhat smaller than those for the comparable months of 1931, but exceeded those during the first half of the two previous years. A total of 38,055,000 pounds was exported this year, against 41,553,000 pounds in the first six months of 1931, 33,872,000 pounds in the first half of 1930, and 36,653,000 pounds shipped abroad in the first half of 1929.

A substantial decline in exports of crude scale paraffin wax development, however, only 5,158,000 pounds being exported in the first half of the year, against 14,520,000 pounds in the first six months last year, 15,804,000 pounds in the first half of 1930, and 11,399,000 pounds in the first half of 1929.

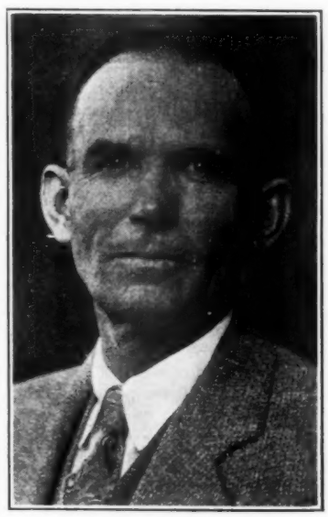
Refined paraffin wax exports in the first half of the year were 3,206,000 pounds, against 5,505,000 pounds in the first six months of 1931,6,708,000 pounds in the first half of 1930, and 1,462,000 pounds in the first six months of 1929.

Market Outlook

No pronounced recovery in export business is looked for by the local trade during the closing half of 1932. While a world agreement on prices and market allocation would go far toward eradicating the major evils of the export market situation, recovery in currencies of buyer nations, as well as a general economic snap-back, must come before the American petroleum industry starts on the way back toward its former ascendancy in world markets.

J. M. Gholson Dies Pioneer in Ranger

FORT WORTH, Tex., July 25.—John M. Gholson, pioneer oil operator of Ranger, Tex., died at the Ranger Hospital, July 21, following an operation. Mr. Gholson was the second mayor of



JOHN M. GHOLSON

Ranger, during the boom, and was one of the most active operators in that district. He was born near Monticello, Ky., August 29, 1876, and moved with his parents to Fort Worth in 1885, going to Ranger when he was 16.

BUNKERING AT ENGLISH PORTS

The quantity of oil fuel shipped in the first four months of this year for the use of steamers and motorvessels engaged in the foreign trade and of fishing vessels at English ports amounted to 56,194,000 gallons, as compared with 71,659,000 gallons in the corresponding period of 1931.

NEWS FOR SALES DEPARTMENTS

Nullify Law Applying to Auxiliary Tanks In Trucks

WASHINGTON, D. C., July 22.—Earl Spiker of Winchester, Va., charged with importing gasoline into Virginia in violation of the gasoline tax law enacted at the last session of the general assembly was found not guilty today in the Arlington county court.

It was charged that in addition to the tank on the truck which he was driving there were auxiliary tanks containing gasoline which was claimed by the commonwealth as a direct violation of the law. Counsel for the defendant showed the court that the tanks were properly connected with the motor and were thereby a part of the equipment. The cargo capacity of the truck was 5 tons with 28 gallons of gasoline for use of the motor. An appeal was taken by the commonwealth.

In another case in which the auxiliary tanks were not attached to the motor a fine was levied on the truckman.

The law applying to these cases provides that:

"Any person importing or causing to be imported into the State for their own use such motor fuel in any container other than the usual tank or receptacle connected with the engine of the motor vehicle, in the operation of which the motor fuel is to be consumed, will be in violation of the law."

If the Spiker decision is affirmed in the higher courts it is said it will largely nullify the effect of the law as contemplated, as the connection of auxiliary tanks with the motor is not a difficult operation.—C. E. K.

Large Increase in Imports of Oils at Port of Montreal

MONTREAL, Quebec, July 23.—Petroleum and gasoline are now included among the most important commodities handled through the port of Montreal. Figures published covering the present navigation season to the end of June show the growing importance of oil imports in the business handled over the harbor wharves. Well over half a million tons of these commodities were handled in the first two and a half months since navigation on the St. Lawrence opened at the middle of April. To the end of June the amount of petroleum and gasoline landed totaled 559,368 tons, or 130,796 tons higher than in the corresponding period last year.

Six companies, it is stated, are responsible for the oil imports into Montreal: The British American Oil Co., Imperial Oil, Ltd., McColl Frontenac Oil Co., Ltd., Shell Oil Co. of Canada, Ltd., Sun Oil Co., Ltd., and Sunnyside Service Oil Co. of Detroit. The first four companies accounted for the bulk of the importations, and of these the first three have large refining plants at Montreal East, while Shell Oil Co. of Canada, Ltd., is proceeding with the erection of a large refinery there this year, and construction is also under way on one for the LaSalle Petroleum Refinery, Ltd. Montreal is rapidly increasing in importance as an oil refining center.

CINCINNATI STOPS FRAUDS

The city of Cincinnati has made operative its new oil ordinance, designed to stop oil frauds and eliminate gasoline bootlegging. Under the terms of the law, misbranding of petroleum products is prohibited and the sale at retail from a tank truck or other vehicle used for transporting liquid fuels is forbidden.

Government Report Shows Wholesale Value of Petroleum Products

By C. E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 23.—The wholesale distribution of petroleum products is the subject of a survey made by the Census Bureau.

These distribution figures, just made available, show that 22,981 establishments specialize in the distribution of petroleum products, exclusive of crude oil. The total net sales in 1929, based on the census taken in 1930, were $3,224,846,000 and included not only the sales of petroleum products but also a certain amount of other commodities which are normally handled by such concerns, and which amounted to but 1.08 per cent of net sales.

The wholesale distribution of petroleum products was reported by several distinct types of establishments. Of these, bulk tank stations (wholesale establishments owned by refiners or chains other than general or district sales offices) were the most important type with 19,586 establishments and 65.12 per cent of the total volume of business. Wholesale merchants with 2,994 establishments and 16.46 per cent of the total net sales ranked second. Bulk tank stations and wholesale merchants combined accounted for over 81.5 per cent of the total. The remaining business was divided among 20 general sales offices with 7.56 per cent of the total business, 25 export houses with 5.20 per cent, 126 manufacturers' sales branches with 1.99 per cent, 114 agents and brokers with 1.41 per cent, 33 drop shippers with 0.53 per cent, 46 wagon distributors whose sales accounted for 0.17 per cent of the entire volume of petroleum business, and 37 establishments of miscellaneous types accounting for the balance.

Expenses Vary

Total expenses (not including cost of goods), which averaged 13.84 per cent of net sales for the entire group, varied from a low of 1.22 per cent for the export houses to a high of 21.94 per cent for manufacturers' sales branches. There was 2.26 per cent difference between the costs of bulk tank stations and those of wholesale merchants, the former averaging 16.04 per cent and the latter 13.78 per cent. Drop shippers showed total expenses of 6.56 per cent of their net sales and wagon distributors 18.82 per cent.

Wholesale petroleum establishments were located in every state of the Union and in the District of Columbia. There was a considerable degree of concentration, however, as shown by the fact that New York and California together accounted for over 27.5 per cent of the total business and the seven states of New York, California, Pennsylvania, Illinois, Ohio, Texas and Massachusetts, ranked in order of importance, accounted for over half of the total wholesale trade in petroleum and petroleum products. The following table summarizes the government report:

WHOLESALE DISTRIBUTION OF PETROLEUM PRODUCTS BY STATES

State—	Number of establishments	Net sales
Alabama	386	48,874,000
Arizona	87	13,716,000
Arkansas	327	12,305,000
California	708	393,670,000
Colorado	445	31,472,000
Connecticut	120	31,705,000
Delaware	40	7,234,000
District of Columbia	4	10,656,000
Florida	474	86,018,000
Georgia	563	110,966,000
Idaho	193	11,015,000
Indiana	831	56,853,000
Illinois	1,284	176,212,000
Iowa	1,195	37,649,000
Kansas	1,226	40,889,000
Kentucky	275	42,851,000
Louisiana	279	39,781,000
Maine	109	16,907,000
Maryland	180	38,675,000
Massachusetts	243	128,508,000
Michigan	783	113,222,000
Minnesota	1,036	59,507,000
Mississippi	425	39,121,000
Missouri	1,078	73,024,000
Montana	384	14,055,000
Nebraska	325	14,882,000
Nevada	39	5,288,000
New Hampshire	70	8,598,000
New Jersey	214	120,685,000
New Mexico	161	11,563,000
New York	724	490,522,000
North Carolina	507	49,023,000
North Dakota	584	20,468,000
Ohio	604	152,868,000
Oklahoma	973	70,298,000
Oregon	165	36,785,000
Pennsylvania	681	177,054,000
Rhode Island	31	17,225,000
South Carolina	289	26,256,000
South Dakota	442	17,698,000
Tennessee	179	22,982,000
Texas	2,411	139,848,000
Utah	120	11,798,000
Vermont	58	6,130,000
Virginia	365	44,239,000
Washington	245	64,793,000
West Virginia	167	21,531,000
Wisconsin	820	53,153,000
Wyoming	122	6,273,000
Total United States	22,981	$3,224,846,000

Canadian Imports Received From Many Foreign Areas

WASHINGTON, D. C., July 25.—Imports of petroleum, asphalt and their products into Canada during May were valued at $4,847,855 consisting of 73.4 per cent from the United States, 7.2 per cent from Peru, 6.5 per cent from Colombia, 6.2 per cent from Dutch West Indies, 3.3 per cent from Venezuela, 2.9 per cent from Trinidad and the remainder from Mexico, Great Britain, India, Germany, Belgium and Japan.

Crude petroleum imported into Canada totaled 109,518,026 gallons, made up of 80,083,058 gallons from the United States, 11,295,907 gallons from Venezuela, 8,903,190 gallons from Peru, 8,182,924 gallons from Colombia and 1,052,947 gallons from Trinidad. During May $166,556 worth of these products were exported from Canada compared with exports of $76,702 in the preceding month according to the Dominion Bureau of Statistics of Ottawa.

B. C. REFUSES GASOLINE PROBE

CHATHAM, Ontario, July 23.—Hon. H. H. Pooley, acting premiur of British Columbia, has announced that the provincial government finds itself unable to institute an inquiry into the recent increase of 2 cents a gallon in the price of gasoline. The probe was asked by the Automobile Club of British Columbia and other organizations, but there is, Mr. Pooley states, no legislation authorizing the government to investigate commodity prices. An investigation by the Federal government under the Combines Investigation Act is suggested.

Oil Concerns Share In Vacation Expenditures

Vacation travel by American motorists is accorded the status of "big business" in the annual "Facts and Figures of the Automobile Industry" issued recently by the National Automobile Chamber of Commerce.

Estimates of the American Automobile Association quoted in the chamber's statistical yearbook place the total expenditure of vacation motorists in 1931 at $3,110,000,000, an amount exceeding the gross annual volume of business of most of the nation's largest industries. Of this total, it is reported $2,750,000,000 was spent in the United States. Oil companies through sales of gasoline and lubricants obtained a substantial part of this expenditure.

Tourists from this country contributed approximately $285,000,000 to the revenue of Canadian shops, hotels and filling stations. The opening of new roads south of the Rio Grande benefited Mexican commerce to the extent of approximately $25,000,000. Likewise, American motorists are believed to have spent about $50,000,000 traveling in their own automobiles through Europe and countries in other sections of the world.

Studies revealed that restaurants have the largest single claim on the vacationists' dollar; that 21 cents of this dollar is spent for food, 20 cents for hotels or other lodging, 20 cents for transportation costs, 8 cents for amusements, 6 cents for confectionery, and 25 cents for miscellaneous retail purchases.

National forests and parks figured prominent in the itineraries of 1931 tourists. More than 29,000,000 persons traveled by automobile last year to national forests alone, and motor tourists accounted for 92 per cent of all visitors to these reservations. Less than 2,000,000 of the visitors were carried by electric and steam railroads, and approximately 250,000 were hikers.

In addition, there were 897,038 motor vehicles registered at one or more of the country's national parks during the year. This was an increase of more than 350 per cent over the number of cars visiting the parks in 1922.

GERMAN CONSUMPTION LESS

WASHINGTON, D. C., July 23.—The consumption of gasoline in Germany has shown an especially heavy decline. Automobiles stored in Berlin in the fall numbered 25,000 and thus far only 10,000 of them have been re-registered. In the first four months of this year Germany imported 4,449,704 bbls. of mineral oils, a decrease of 30 per cent from imports of the corresponding months of 1931. Declines in gasoline imports were 44 per cent for gasoline, 29.5 per cent for crude oil, 26 per cent for gas oil and 13 per cent for lubricants.

ANNOUNCE OIL BURNER SHOW

NEW YORK, July 23.—The tenth annual convention and exhibition of the oil burner industry will be held in Chicago at the Hotel Stevens during the week of June 11, 1933, in conjunction with the opening of the Century of Progress, Morgan J. Hammers, president of the American Oil Burner Association, announced.

"In view of the fact that the oil burner is a product typical of those which mark America's 'Century of Progress'," Mr. Hammers said, "it seems entirely fitting to our directors, after reviewing the wishes of our industry as a whole, that the oil burner industry should celebrate the tenth anniversary of its public shows coincident with the opening of this great international exposition."

Courtney-Pryor Pool to Get First Connection; Ten New Locations in Wichita Falls Field

By L. E. BREDBERG

Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 25.—The Courtney-Pryor Pool, 12 miles west of Fort Stockton, Pecos County, will soon see its first connection and pipe line shipment of oil. The Western Construction Co. of McCamey is laying approximately 12 miles of 3-inch line from a loading rack on the Santa Fe Railroad, Fort Stockton, to the pool which is located in Section 78, Block OW, and in which there are two shallow producing wells making around 230 bbls. per day.

The Cardinal Oil Co., which recently acquired a half interest in these wells and block, is laying the line, which is to be in operation by the middle of August. The oil will be shipped in tank cars to McCamey where it will be taken over by the Shell Petroleum Corp., run to its storage tanks, then into its main line from McCamey.

The Phillips Petroleum Co. opened this pool in May, 1929, and retained a half interest in the wells and the block of some 6,200 acres.

Runnels County

Blue Bonnett Petroleum Co.'s No. 1 R. M. McMillan, new producer in the McMillan Pool, Runnels County, is still waiting on tanks prior to its cleaning out and testing. It flowed 61 bbls. in 1 hour and 10 minutes on the morning of July 23, and 20 bbls. in 30 minutes in the afternoon of the same day, after cleaning out 5 feet of cavings the day before. It is located in Section 22 of the N. Travis Survey No. 533, approximately 1,500 feet northwest of the discovery well, and the only remaining producer in the field. Total depth is 2,522 feet, 2 feet in the sand. The Concho Refining Co. of San Angelo has been hauling crude from the well to its refinery by tank truck. The oil tests 44 degrees gravity.

Noel T. Lawson and others' (Tribal Oil Co.) No. 1 M. M. Edwards in Section 16, Blook 33, Township 2s, T.&P. Survey, was deepened to 2,125 feet this week and swabbed better than 60 bbls. per hour on a three-hour swabbing test. It was put on the pump, yielding a better initial production than on the swab. This well extends the Glasscock County Pool approximately one-half mile, and will lead to future drilling to the west and probable further extensions for the pool. The newly formed company of Big Spring men are to drill a second test on the 80 acres which was formerly held by The Texas Company, and farmed out to Lawson and associates.

RANGER AND WICHITA FALLS

There were 10 locations staked in the Ranger district this week, and the same number of tests completed, Shackelford County leading in completions, while Callahan County led in number of locations.

Recent completion of the Octane Refining Co.'s refinery at Chautauqua Switch in Callahan County, and demand of the advance high gravity crude by this refinery has led to a 20-cent per barrel increase for the 36 gravity crude from the nearby shallow pool in the county, advancing the new price to 80 cents. The Woodley Petroleum Co. posted the new price. J. R. Parten, president of the Woodley Petroleum Co. of Shreveport, La., is also the principal owner of the refinery.

Cunningham and Lynch's No. 4 Kisinger, an old producer which has been making only 8 bbls. per day from sand logged from 2,486-2,509 feet, but which formerly came in for an initial production of 119 bbls., was deepened to 2,770 feet and abandoned at that depth marking a deepening failure for the Kisinger Pool in south Young County, and placing a ban on such further activities in this area.

Jack County

The Buttram Petroleum Corp. has abandoned its No. 1 Holman in the Buttram Pool, Jack County, at a total depth of 3,870 feet. It had oil showings from 2,020-2,115 feet, oil and gas sand from 2,930-33 feet, and from 3,070-71 feet made 700,000 feet of gas and 4 bbls. of oil daily, but failed to prove a commercial producer.

Archer County

The Lamont Drilling Co. has sold its lease to White, Duncan, Holt and Tedford in the recently opened shallow pool, in Archer County. The acreage is comprised of 40 acres in Block 1, I.&G.N. Survey, Abstract 239, McCarty Oil Co.'s No. 1 Terrell is the sixth producer in this area and extends the pool two more locations north of the last drilled well. It made 200 bbls. in seven hours, no water. Sand was logged at 686 feet, and total depth is 704 feet.

W. B. Hamilton's No. 1 Ikard, which opened a new shallow area in Archer County, came in for an initial production of only 15 bbls., on the pump. It topped the Gunsight lime at 1,153 feet, saturated lime at 1,155-63 feet, and was shut down at 1,168 feet. There are two offsets drilling.

The Bridwell Oil Co. has abandoned its No. 1 Jackson Strawn sand test 1 mile northwest of the Strawn sand producer in the Chalk Hill Pool, Archer County. Only a slight showing of oil was made in the Strawn sand at 3,675-80 feet. Elevation of the test is 968 feet.

Verne Dumas is to drill a second test on his 28,000-acre block in southeast Grayson County. The first well will be drilled to 7,000 feet, and the second will be drilled to 4,000 feet. He is taking another block in the county, surrounding the townsite of Howe, 5 miles north of No. 1 Williams, 7,000-foot test, which is underway.

J. S. Bridwell has purchased 5,500 acres in fee in southeast Archer County, south of the town of Windthorst, and will probably drill three or four tests on the land, including one deep test.

PANHANDLE

Following the deepening of oil wells in various pools in this district to increase production several of the companies are planning repressuring their leases in an effort to increase production. The Phillips Petroleum Co. is experimenting with repressuring in the Borger Pool, Gray County, using residue gas from its casinghead gasoline plant for this purpose. The Skelly Oil Co. and Gulf Production Co. are also considering repressuring leases in this area. The latter company has installed equipment on its Worley lease in Section 83, Block 3, I.&G.N. Survey, Gray County, and may use the same type of equipment for experimenting on its Dial leases in Hutchinson County.

Elbar Corp.'s No. 1 Gethings, semi-wildcat, 1 mile from production in eastern Gray County, was abandoned this week at 2,756 feet, making only a 5-bbl. showing from 2,618-28 feet after a shot between these depths. This was an interesting test due to the fact that this area has recently been extended over into Wheeler County, and appeared as having the makings of a larger producing area.

COMPLETIONS IN WEST TEXAS DISTRICT

Glasscock County

California Oil Co.'s No. 2 Barker, total depth 2,483 feet, plugged back to 2,476 feet, old total depth 2,320 feet, new initial production 120 bbls.

Mann and others' No. 1 Fee, dry and abandoned, total depth 3,470 feet.

Irion County

Apollo Oil Co.'s No. 4 Nutt, top pay 1,462 feet, initial production 10 bbls. pumping, total depth 1,467 feet.

Ward County

Rixford and others' No. 1 Green, top salt 995 feet, top pay 2,375 feet, shot 30 quarts 2,375-90 feet and 24 quarts from 2,940-46 feet, initial production 30 bbls. through 2-inch tubing, total depth 2,454 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Carson County

Skelly Oil Co.'s No. 18 West Schaffer, top pay 3,060 feet, initial production 216 bbls., total depth 3,100 feet.

Texoma Natural Gas Co.'s No. 1-G Dover, top pay 2,239 feet, initial production 33,000,000 feet of gas, total depth 2,455 feet.

Gray County

Elbar Corp.'s No. 1 Sethings, dry and abandoned, total depth 2,850 feet, shot 20 quarts 2,618-28 feet. Saulsbury and others' No. 1 Davidson, top pay 2,990 feet, shot 150 quarts 2,991-3,037 feet, initial production 256 bbls., total depth 3,043 feet. The Texas Company's No. 7 Bowers (old well deepened), old total depth 3,035 feet, was making 25 bbls., new pay 3,080 feet, initial production 155 bbls., total depth 3,088 feet. Wilcox Oil & Gas Co.'s No. 19 Combs-Worley, temporarily abandoned location.

Wildcat Operations in West Texas

Week Ending July 25

BORDEN COUNTY

Company, well, farm name, section and block— Remarks—

Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n, T.&P. Sur. ..... Set 15-in. csg. 350 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur. ..... S.D. 1,935 ft.

E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur. ..... S.D. 1,302 ft.

Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 352, W. J. Mitchell Sur. ..... Rigging up cable tools.

Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur. ..... S.D. 2,906 ft.

Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine ..... S.D. 1,750 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 460 ft. from N and E, Sec. 163, T.&N.O. Sur. ..... S.D. 1,700 ft.

CROCKETT COUNTY

Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. ..... Spudded and S D.

Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur. ..... S.D. 512 ft.

The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36¼, I.&G.N. Sur... Drlg. 725 ft.

J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur. ..... Location.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 980 ft. from S and W, Sec. 271, Blk. 1-A, H.&T.C. Sur. ..... Fag. 3,050 ft.

(Continued on Page 103)

Wildcat Operations in Texas Panhandle

Week Ending July 25

CARSON COUNTY

Company, well, farm name, section and block— Remarks:

H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E, Sec. 5, Blk. 9, I.&G.N. Sur. ..... Rig.

Osborne's No. 1 Byrum, 330 ft. from N and E, N½ NW, Sec. 188, Blk. 3, I.&G.N. Sur. ..... Rigging up rotary.

Pulse-Shell Pet. Corp.'s No. 1 Byrum, 330 ft. from N and W, W½ NE, Sec. 188, Blk. 3, I.&G.N. Sur. .... T.D. 3,221 ft; flowing 8 bbls. per hour.

Skelly Oil Co.'s No. 11 East Schaffer, 440 ft. from N, 2,640 ft. from E, Sec. 189, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,515 ft.

Texoma Nat. Gas Co.'s No. 1-T, 2,640 ft from N line, 783 ft. from W line, Sec. 21, Blk. 7, I.&G.N. Sur..... Drlg. 710 ft.

COLLINGSWORTH COUNTY

Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur. ..... Rigged up.

Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur. ..... Spud.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Puesall, 330 ft. from N, 1,320 ft. from E, Sec. 40, Blk. B, John H. Stevens Sur. ..... Drlg. 605 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e ..... T.D. 925 ft; U.R. 12½-in. csg.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.

Bell O. & G. Co.'s No. 1 Tedesco-Webb, 330 ft. from S and E, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Drlg. 150 ft.

Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 1,650 ft.

(Continued on Page 104)

New Hope of Checking Running of Excess Oil Following Court Decision on East Texas

By L. E. BREDBERG

DALLAS, Tex., July 25.—Following the decision of the three-judge Federal Court upholding proration it is believed that much of the oil which has been run in excess of the daily allowable, will vanish from the market as operators will now begin to abide by proration orders. Estimates made by men in the field show that from 20,000 to 100,000 bbls. of oil per day is being taken out in excess of the daily allowable production. It is also estimated that 150,000 gallons of bootleg gasoline is being hauled out by truck to Fort Worth, Dallas, Shreveport and other large centers of consumption. If excess production is checked, this bootleg gasoline will also be curtailed to a great extent.

The Railroad Commission recently checked the books of one major pipe line company and found it running in excess. If there is over 25,000 bbls. of oil going out from the field in excess of the daily allowable, major pipe line companies would have to carry it as other facilities are not great enough to carry such an amount.

Locations and Completions

There were 125 locations staked in the district during the week, with 152 wells on the completion report, locations falling off six from the previous week, while completions increased 15 wells. Since all three members of the Railroad Commission are now required to sign drilling permits, and with the decision handed down by the three Federal judges, locations are expected to be curtailed considerably, especially on the small tracts which some of the operators have been subdividing to obtain drilling permits for one or more wells.

Oil and Gas Marker

Mid-Kansas Oil & Gas Co.'s No. 1 C. L. Graham in the Peter Tipps Survey, southern Gregg County, specifically marks the line between the oil and gas producing areas of the field. The well came in this week as a 12,000,000-foot gasser with 830 pounds back pressure, the gas sand being logged from 3,651-56 feet. It is a south offset to the Sun Oil Co.'s No. 1 Alfred Lee which had difficulty in making a small oil producer, and first gave indications as to where the dividing line would be found, separating the two producing areas.

On the north end of the field, Hawkeye Petroleum Corp.'s No. 1 Mackey in the T. Hopkins Survey, Upshur County, approximately midway between production on the south and the two producers to the north, Cranfill and Reynolds' No. 1 Rash and Maddox Development Co.'s No. 1 Starr, tested salt water, and the owners will set pipe to shut off water and make a test. Total depth is 3,763 feet, and if it makes a producer the pay horizon will be the same as in the wells to the north. At present it looks like a failure, and the dividing marker between the pool proper to the south, and the area to the north which is producing from a pay horizon found considerably deeper than the regular Woodbine pay in the field.

Pressure Diminishing

Every week sees the addition of more pumpers and more abandoned edge wells in the field, absolute signs that pressure is diminishing. Three tests were abandoned on the eastern edge this week, and two others refused to flow, necessitating pumping to make their daily allowable. Otto Morris and others abandoned their No. 1 T. D. Harris in the John Ruddle Survey at a total depth of 3,598 feet. This test is on the east side of the field in Gregg County. Humble Oil & Refining Co.'s No. 1 Smith in the D. Sanchez Survey, east Gregg County, was abandoned at 3,698 feet in Georgetown lime, and Gulf Production Co. and others' No. 7 Still in the Wilkinson Survey, a short distance north of Kilgore, was also ordered plugged at a total depth of 3,653 feet although it made a small amount of oil from sand logged at 3,551-3,610 feet.

Louisiana Oil & Refining Co.'s No. 4 Mayfield in the H. Hobson Survey, on the east edge, Rusk County, went dead after swabbing and flowing 76 bbls. in 3½ hours, and will be reduced to pumping. Everts Drilling Co.'s No. 2 B. N. Barton in south Gregg County is another east side pumper, making its allowance in eight hours from sand topped at 3,544 feet. Total depth is 3,632 feet.

The Humble Oil & Refining Co. is drilling all of its east edge wells into the Georgetown lime to obtain geological information and data as to how far east its production will extend. Pressure data will also be obtained from this drilling through the sand and into the lime.

Pipe Line Connections

The East Texas pipe line committee met at Dallas on July 19 for the purpose of planning connections for more unconnected wells, this committee striving to meet the situation of unconnected wells so far as possible, and connect with all wells although it is a colossal task when about 150 wells are being completed each week. Operators who had drilled more than one well per 20 acres, and who were warned to find other connections before drilling more wells on small tracts, are having difficulty finding connections since they drilled excess wells on their leases unmindful of the warning by the purchasing company which was taking oil from the first drilled wells. Realizing it will be difficult to obtain connections for such excess wells may prevent others subdividing and drilling on small tracts, thereby curtailing the staking of over 100 locations each week.

By-passing in the field is still practiced by the unscrupulous. One well was found during the week with two by-passes leading from it. The oil company owning the lease professed to know nothing about the by-passes. One of the employes of the company had been selling oil which was hauled out by tank trucks.

Oil was sold from another lease at 35 cents per barrel, 8,000 bbls. being run from the lease in 13 days, this amount being considerably over the allowable. It is the general understanding in the field that this practice is being maintained throughout the field, one reason for pipe line companies refusing to take on more connections. The attorney general's department has sent an assistant into the field to help with the investigation and prosecution of infringements of the Railroad Commission's orders.

Daily Distribution

The daily average distribution from the field week ending July 18 was 346,710 bbls., daily average production was 345,566 bbls., daily average production taken from storage was 1,144 bbls.

Twenty-seven operators and companies in East Texas now hold 81,843 acres in the producing area, and have 4,100 producing wells, or one well to every 19.96 acres. All others in the field hold 32,061 acres, and have 2,773 producers, or one well to every 11.56 acres.

Shell Petroleum Corp. has farmed out its 66-acre Graves lease in the N. M. Irwin Survey, Upshur County, to Lester and Duffield for a five-sixteenths overriding royalty. This is an edge lease.

Dr. E. E. Winship of the Chalmette Refining Co., Chalmette, La., and M. Grogan of the Louisiana Oil & Refining Co., and Lon Walsh of the Beacon Oil & Refining Co., Henderson, Tex., have formed a company to purchase fuel oil from East Texas refineries. Gravity of this oil is 29 degrees, and it is being purchased for 40 cents per barrel.

Wildcatting Activities

Watson's No. 1 D. F. Smith, in the J. R. Davis Survey, Upshur County wildcat, is rigging up, and Ryan Consolidated Oil Co. is rigging up No. 1 J. M. Furrh in the J. T. Conklin Survey, Harrison County.

H. H. Meyers of Tyler has assembled 4,000 acres centering in the George Wilson Survey, 2 miles west of Brownsboro in Henderson County, and is drilling a Woodbine sand test on the M. E. Olson tract. Location is about 3 miles north of the old Ashburn test drilled to 4,000 feet and abandoned in the Austin chalk.

Kinsey and others have rewritten leases on their block centering 1½ miles north of Coffeyville, in the northeastern part of Upshur County, and are preparing to start a Woodbine sand test in the J. R. Davis Survey.

Joiner's No. 1 W. H. Martin, in the D. Parker Survey, Cherokee County, topped the Pecan Gap chalk at 2,952 feet and is drilling below 3,825 feet.

Lone Star Syndicate's No. 1 Owenby, 3 miles northwest of Emory in the T. Alexander Survey, Rains County, topped the Pecan Gap chalk at 1,996 feet and the Austin chalk at 3,468 feet, drilling the base at 3,800 feet. It is now drilling at 4,600 feet.

Paleontologists have placed the top of the Georgetown lime in Bayliss' No. 1 Owenby, Rains County, at between 4,460 and 4,470 feet.

COMPLETIONS IN EAST TEXAS

Cherokee County

Mid-Kansas Oil & Gas Co.'s No. 2 H. D. Kelley, top sand 3,690 feet, initial production 92 bbls. through open tubing, total depth 3,694 feet.

North Gregg County

Alma Petroleum Co.'s No. 3 C. R. Cox, top sand 3,668 feet, initial production 42 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,719 feet. Arkansas Fuel Oil Co.'s No. 3 Burnside, top sand 3,464 feet, initial production 42 bbls. in one-fourth hour through three-fourths inch tubing choke, total depth 3,488 feet; No. 4 Burnside, top sand 3,475 feet, initial production 42 bbls. in one-fourth hour through three-fourths inch tubing choke, total depth 3,499 feet; No. 3-B Lathrop, top sand 3,604 feet, initial production 26 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,626 feet; No. 4-A Taylor Lee, top sand 3,553 feet, initial production 42 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,575 feet; No. 6 Tuttle, top sand 3,557 feet, initial production 43 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,593 feet. Atlantic Oil Production Co.'s No. 8 J. Bander, top sand 3,573 feet, initial production 24 bbls. per hour through three-fourths inch tubing choke, total depth 3,624 feet; No. 8-A E. Burnside, top sand 3,512 feet, initial production 68 bbls. per hour through 1¼-inch tubing choke, total depth 3,534 feet; No. 3-B W. T. Burnside, top sand 3,495 feet, initial production 64 bbls. per hour through 1¼-inch tubing choke, total depth 3,520 feet; No. 10-B W. T. Burnside, top sand 3,469 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,515 feet; No. 4 Judge, top sand 3,504 feet, initial production 64 bbls. per hour through 1½-inch tubing choke, total depth 3,524 feet; No. 17 Judge, top sand 3,499 feet, initial production 33 bbls. per hour through 1-inch tubing choke, total depth 3,524 feet; No. 20 Judge, top sand 3,510 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,527 feet; No. 11 Moore, top sand 3,504 feet, initial production 64 bbls. per hour through 1¼-inch choke and 1½-inch tubing, total depth 3,529 feet; No. 2 P. McGeorge, initial production 64 bbls. per hour through 1¼-inch choke and 1½-inch tubing, total depth 3,546 feet; No. 2 H. Pritchard, top sand 3,508 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,529 feet; No. 7 H. Pritchard, top sand 3,495 feet, initial production 64 bbls. per hour through 1¼-inch choke and 1½-inch tubing, total depth 3,530 feet. Atlantic and Sun Oil Co.'s No. 7 M. Hays, top sand 3,505 feet, initial production 64 bbls. per hour through 1½-inch tubing choke, total depth 3,550 feet.

Columbia Oil & Gas Co.'s No. 2-B A. Christian, top sand 3,599 feet, initial production 40 bbls. per hour through 1¼-inch tubing choke and 1½-inch tubing, total depth 3,616 feet. Atlantic and Sun Oil Co.'s No. 3-B R. C. Barnswell, top sand 3,484 feet, initial production 33 bbls. per hour through 1-inch tubing choke, total depth 3,542 feet. Cranfill & Reynolds' No. 3 R. C. Barnswell, top sand 3,505 feet, initial production 50 bbls. per hour through tubing, total depth 3,535 feet. Dean & Adkins' No. 2 Bacle, top sand 3,612 feet, initial production 41 bbls. in 32 minutes through three-fourths inch tubing, total depth 3,640 feet. Deep Rock Oil Corp.'s No. 2 H. Pritchard, top sand 3,502 feet, initial production 45 bbls. in one-fourth hour through 2-inch open tubing, total depth 3,560 feet. Dych Oil Co.'s No. 4 J. M. Christian, top sand 3,549 feet, initial production 74 bbls. per hour through three-fourths inch tubing choke, total depth 3,590 feet. East Texas Oil Co.'s No. 5 A. Christian, top sand 3,646 feet, initial production 50 bbls. per hour through three-fourths inch tubing choke, total depth 3,666 feet. Empire Gas & Fuel Oil Co.'s No. 7 T. W. Lee, top sand 3,530 feet, initial production 32 bbls. in one-fourth hour through 2-inch open tubing, total depth 3,563 feet. Faith Oil Co.'s No. 4 B. B. Fenton, top sand 3,686 feet, initial production 60 bbls. per hour through 2-inch tubing choke, total depth 3,708 feet.

Gulf Production Co.'s No. 6 A. V. Bacle, top sand 3,628 feet, initial production 60 bbls. per hour through three-fourths inch tubing choke, total depth 3,649 feet; No. 11 F. C. Fishburn, top sand 3,477 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,500 feet; No. 14 Judge, top sand 3,528 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,559 feet; No. 16 Judge, top sand 3,494 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,517 feet; No. 16 Sheppard,

top sand 3,477 feet, initial production 88 bbls. per hour through three-fourths inch tubing choke, total depth 3,482 feet; No. 17 Sheppard, top sand 3,481 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,586 feet.

Humble Oil & Refining Co.'s No. 3 McFarland, top sand 3,577 feet, initial production 22 bbls. in 15 minutes, total depth 3,626 feet. Lee Brothers Drilling Co.'s No. 1 Johnson, top sand 3,618 feet, initial production 40 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,627 feet. Magnolia Petroleum Co.'s No. 5 R. L. Salter, top sand 3,562 feet, initial production 120 bbls. per hour through 2-inch open tubing, total depth 3,599 feet; No. 2 Stone, top sand 3,601 feet, initial production 104 bbls. per hour through 2-inch tubing choke, total depth 3,620 feet. Mar Lafoy Oil Co.'s No. 1 L. J. Everett, top sand 3,628 feet, initial production 38 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,640 feet. Jim McMurray's No. 3 Snoddy, top sand 3,592 feet, initial production 50 bbls. in 30 minutes through 2-inch tubing, total depth 3,614 feet. Otto Morris and others' No. 1 T. D. Harris, top sand 3,497 feet, dry and abandoned, total depth 3,598 feet (J. Ruddle Survey). Omega Oil Corp.'s No. 2 Nicholson, top sand 3,586 feet, initial production 60 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,598 feet. Rio Oil Co.'s No. 2 Graves, top sand 3,581 feet, initial production 33 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,597 feet.

Selby Oil & Gas Co.'s No. 7-B Snavely heirs, top sand 3,571 feet, initial production 35 bbls. in 15 minutes through open tubing, total depth 3,582 feet; No. 11-B Snavely heirs, top sand 3,558 feet, initial production 32 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,581 feet. Sells Petroleum Co.'s No. 3 R. Fisher, top sand 3,558 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,619 feet.

Shell Petroleum Corp.'s No. 7 E. Burnside, top sand 3,519 feet, initial production 14 bbls. in 30 minutes through tapered tubing, total depth 3,549 feet; No. 2 F. C. Fishburn, top sand 3,500 feet, initial production 15 bbls. in 30 minutes through tapered tubing, total depth 3,550 feet; No. 3 Fishburn, top sand 3,490 feet, initial production 15 bbls. in 30 minutes through tapered tubing, total depth 3,498 feet; No. 3 J. Moore, top sand 3,528 feet, initial production 15 bbls. in 30 minutes through tapered tubing, total depth 3,557 feet; No. 11 J. Moore, top sand 3,537 feet, initial production 15 bbls. in 30 minutes through tapered tubing, total depth 3,561 feet; No. 4 T. H. Stinchcomb, top sand 3,4[illegible] feet, initial production 12 bbls. in 30 minutes through tapered tubing, total depth 3,462 feet. L. Sikes and others' No. 2 L. A. Rodden, top sand 3,599 feet, initial production 52 bbls. in 30 minutes through 2-inch open tubing, total depth 3,607 feet. E. L. Smith's No. 2-A C. L. Taylor, top sand 3,507 feet, initial production 50 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,532 feet. E. L. Smith and others' No. 3-A C. L. Taylor, top sand 3,520 feet, initial production 50 bbls. in 30 minutes though three-fourths inch tubing choke, total depth 3,555 feet; No. 2-B C. L. Taylor, top sand 3,472 feet, initial production 48 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,500 feet.

Sun Oil Co.'s No. 10 Akins, top sand 3,532 feet, initial production 44 bbls. per hour through tapered tubing, total depth 3,609 feet. Superior Oil Co.'s No. 7-A Pritchard, top sand 3,512 feet, initial production 227 bbls. per hour through 2½-inch tubing open, total depth 3,563 feet; No. 2-B Pritchard, location abandoned. Tidal Oil Co.'s No. 10 Lake Devernia, top sand 3,508 feet, initial production 22 bbls. in 10 minutes through 2-inch open tubing, total depth 3,550 feet. Washington Oil Co.'s No. 3 Cobb heirs, top sand 3,521 feet, initial production 80 bbls. per hour through 1-inch tubing choke, total depth 3,560 feet. Yount-Lee Oil Co.'s No. 6 D. Flemster, top sand 3,617 feet, initial production 20 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,637 feet; No. 4-C McKinley, top sand 3,548 feet, initial production 81 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,568 feet.

South Gregg County

Arkansas Fuel Oil Co.'s No. 4 C. Brown, top sand 3,642 feet, initial production 41 bbls. in one-quarter hour through 2-inch open tubing; No. 7 Hughey-Ross, top sand 3,576 feet, initial production 43 bbls. in one-half hour through 2-inch tubing choke, total depth 3,605 feet. Cal-Tex Oil Co.'s No. 3 L. D. Crim, top sand 3,606 feet, initial production 150 bbls. in one and one-half hour through three-quarters-inch tubing choke, total depth 3,610 feet. East Texas Refining Co.'s No. 3 E. Mitchell, top sand 3,574 feet, initial production 50 bbls. in one-half hour through open tubing, total depth 3,612 feet. Empire Gas & Fuel Oil Co.'s No. 3 A. A. Lockhart, top sand 3,651 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,662 feet. Everts Drilling Co.'s No. 2 B. N. Barton, top sand 3,544 feet, initial production 50 bbls. in eight hours (pumping), total depth 3,632 feet. Jack Greenwood's No. 2 Loughridge, top sand 3,736 feet, initial production 40 bbls. per hour through three-quarters-inch tubing choke, total depth 3,738 feet.

Gulf Production Co.'s No. 6 L. D. Crim, top sand 3,623 feet, initial production 73 bbls. per hour through three-quarters-inch tubing choke, total depth 3,633 feet; No. 13 G. W. Culver, top sand 3,517 feet, initial production 60 bbls. per hour through three-quarters-inch tubing choke, total depth 3,557 feet; No. 29 Hilburn Estate, top sand 3,539 feet, initial production 70 bbls. per hour through three-quarters-inch tubing choke, total depth 3,559 feet; No. 35 Hilburn Estate, top sand 3,575 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,589 feet; No. 36 Hilburn Estate, top sand 3,541 feet, initial production 65 bbls. per hour through three-quarters-inch tubing choke, total depth 3,561 feet.

Hughes and Forley's No. 2 Adkins heirs, top sand 3,673 feet, initial production 30 bbls. in one-quarter hour through open tubing, total depth 3,675 feet. T. A. Johnston and John Owens' No. 1-C M. T. Cole, top sand 3,516 feet, initial production 46 bbls. in 25 minutes through open tubing, total depth 3,545 feet. Magnolia Petroleum Co.'s No. 2 R. H. Rowland, top sand 3,516 feet, initial production 25 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,558 feet. Navarro Oil Co.'s No. 3 E. G. Green, top sand 3,545 feet, initial production 50 bbls. per day flowing by heads, total depth 3,577 feet. Patrick Production Co.'s No. 1-B Watson, top sand 3,598 feet, initial production 48 bbls. in one-quarter hour through open tubing, total depth 3,642 feet. Redgrave and Fagan's No. 1 A. Wynn, top sand 3,673 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,680 feet.

Shell Petroleum Corp.'s No. 5 W. D. Lacy, top sand 3,578 feet, initial production 15 bbls. in one-half hour through open tapered tubing, total depth 3,585 feet; No. 4 William and Bonner, top sand 3,530 feet, initial production 15 bbls. in one-half hour through open tapered tubing, total depth 3,605 feet. Sinclair Prairie Oil Co.'s No. 12 S. G. Andrews, top sand 3,457 feet, initial production 30 bbls. in 10 minutes through 1¼-inch tubing choke, total depth 3,488 feet; No. 8-B A. A. King, top sand 3,417 feet, initial production 60 bbls. in one-half hour through 1¼-inch tubing choke, total depth 3,450 feet. H. R. Smith, Inc.'s No. 2 R. Grey, top sand 3,591 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,597 feet. Sun Oil Co.'s No. 11 M. T. Cole, top sand 3,515 feet, initial production 49 bbls. per hour through tapered tubing, total depth 3,560 feet.

The Texas Company's No. 1 Radford, top sand 3,661 feet, initial production 97 bbls. per hour through open 2-inch tubing, total depth 3,664 feet; No. 4 S. D. Walker, top sand 3,564 feet, initial production 88 bbls. per hour through open 2-inch tubing, total depth 3,580 feet. Sam Thomas, trustee's No. 2 McNeely, top sand 3,669 feet, initial production 25 bbls. in 10 minutes through 1-inch tubing choke, total depth 3,676 feet. Uscan Oil Co.'s No. 1 A. M. E. Church, top sand 3,537 feet, initial production 85 bbls. in one-half hour through open tubing, total depth 3,545 feet. Wheelock and Collins' No. 6 Clayton heirs, top sand 3,548 feet, initial production 90 bbls. per hour through open tubing, total depth 3,585 feet. P. W. Wiggins' No. 1 Lula Martin, top sand 3,710 feet, initial production 75 bbls. per hour through open 2-inch tubing, total depth 3,724 feet. Zenith Oil Co.'s No. 3 Crews, top sand 3,723 feet, initial production 90 bbls. per hour through 1½-inch tubing choke, total depth 3,725 feet.

North Rusk County

Abercrombie and Harrison's No. 10 Cantrell, top sand 3,630 feet, initial production 45 bbls. in one-half hour through 1-inch tubing choke, total depth 3,668 feet. Devonian and Gulf Production Co.'s No. 14 Motley, top sand 3,747 feet, initial production 90 bbls. per hour through open 2-inch tubing, total depth 3,749 feet; No. 4 Sexton Estate, top sand 3,654 feet, initial production 60 bbls. per hour through three-quarters-inch tubing choke, total depth 3,729 feet. Humble Oil & Refining Co.'s No. 14-A S. S. Laird, top sand 3,620 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,681 feet; No. 4 Reid, top sand 3,603 feet, initial production 36 bbls. per hour through three-quarters-inch tubing choke, total depth 3,715 feet. E. N. Jones' No. 4 Hindman, top sand 3,650 feet, initial production 35 bbls. per hour through three-quarters-inch tubing choke, total depth 3,669 feet. Louisiana Oil & Refining Co.'s No. 4 Mayfield, top sand 3,635 feet, initial production 76 bbls. swabbing and flowing in three and one-half hours, then wen dead, total depth 3,724 feet, H. Hobson Survey.

Luling Oil & Gas Co.'s No. 3-A Brightwell, top sand 3,634 feet, initial production 75 bbls. in 30 minutes through 2½-inch open tubing, total depth 3,662 feet. Republic Production Co.'s No. 4 Hindman, top sand 3,650 feet, initial production 38 bbls. in 15 minutes through 1½-inch tubing choke, total depth 3,666 feet.

South Rusk County

Adams and Lyles' No. 2 Allen Kersh, top sand 3,632 feet, initial production 45 bbls. per hour through open 2-inch tubing, total depth 3,641 feet. Champlin and Bass' No. 3 R. G. Mason, top sand 3,633 feet, initial production 25 bbls. in 15 minutes through open 2-inch tubing, total depth 3,646 feet. Golding and Murchinson's No. 11 Ida L. Kinney, top sand 3,566 feet, initial production 60 bbls. per hour through 2-inch tubing choke, total depth 3,636 feet. Gulf Production Co.'s No. 7 T. B. Cashen, top sand 3,764 feet, initial production 77 bbls. per hour through three-fourths inch tubing choke, total depth 3,775 feet; No. 6-C Mayfield, top sand 3,653 feet, initial production 68 bbls. per hour through three-fourths inch tubing choke, total depth 3,665 feet; No. 14 G. G. Turner, top sand 3,760 feet, initial production 100 bbls. per hour through three-fourths inch tubing choke, total depth 3,772 feet. Humble Oil & Refining Co.'s No. 5 M. D. Caldwell, top sand 3,702 feet, initial production 49 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,722 feet.

Jackson-Wise and Snowden's No. 3 Stewart, top sand 3,705 feet, initial production 40 bbls. in 30 minutes through open 2-inch tubing, total depth 3,706½ feet. Long Pine Oil Co.'s No. 2 J. B. Wilson, top sand 3,635 feet, initial production 150 bbls. per hour through open 2-inch tubing, total depth 3,666 feet. McMurray and others' No. 3-A Fair, top sand 3,644 feet, initial production 20 bbls. in 15 minutes through three-fourths inch tubing choke, total depth 3,668 feet. J. E. Mabee's No. 4 W. P. Brett, top sand 3,693 feet, initial production 150 bbls. per hour through open 2½-inch tubing, total depth 3,712 feet.

Mid-Kansas Oil & Gas Co.'s No. 2 Clay heirs, top sand 3,619 feet, initial production 40 bbls. per hour through 2-inch tubing, total depth 3,712 feet; No. 15 M. M. Cross, dry and abandoned, total depth 2,713 feet, skidding over; No. 3 Cora L. Graham, top sand 3,651 feet, initial production 12,000,000 feet of dry gas per day through open 2½-inch tubing (Peter Tipps Survey); No. 7 W. T. Grissom, top sand 3,637 feet, initial production 128 bbls. per hour through 2-inch tubing on 2-inch lead, total depth 3,659 feet; No. 9 N. T. Grissom, top sand 3,651 feet, initial production 136 bbls. per hour through 2-inch tubing on 2-inch lead, total depth 3,664 feet; No. 2 D. Ledbetter, top sand 3,596 feet, initial production 56 bbls. per hour through 2-inch tubing on 2-inch lead, total depth

East Central Texas Wildcats

Week Ending July 25

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Frazier et al's No. 1 H. L. Hudson, 200 ft. from S line and 200 ft. from W line of 196-ac. tract, M. Rionda Sur.	Preparing to spud.
Roeser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Derrick.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft

ANGELINA COUNTY

French et al's No. 1 Abney, 150 ft. from S line and 300 ft. from W line of lease, Antasio Barsta Sur.	Swabbing 1,351 ft.

BOWIE COUNTY

Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	Drlg. 450 ft.
Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	Drlg. 3,550 ft.

CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
Davis et al's No. 1 Annie Kelley, 330 ft. from N line and center of E and W lines of 21.4-ac. lease, M. D. L. S. Coy Sur.	Drlg. 3,480 ft.
W. C. Hamilton et al's No. 1 Doctor Jones, 150 ft. from N line and 1,000 ft. from E line of 132-ac. lease, 4 miles SE of Summerfield, J. D. Hamilton Sur.	Location.
Patton-Oliver and Murray's No. 1-A Eddie Toole, skidded derrick 20 ft. W of No. 1 Toole, M.D.L.S. Coy Sur.	Derrick.
Rayburn and Glassco's No. 1 Annie Kelley, 1,714 ft. S and 2,210 ft. W of NW cor. of Pilot Oil Co.'s Kelley 10-ac. lease, M. De Los Santos Coy Sur.	Set surface csg.
Merry Bros. and Perini's No. 2 Annie Kelley, S offset to Pilot Oil Co.'s No. 1 Kelley, M. D. L. S. Coy Sur.	Moving in rig.
Mid-Kansas Oil & Gas Co.'s No. 20 M. M. Cross, 330 ft. from N and W lines of survey, E. B. Foulkes Sur.	Location.
William A. Stone's No. 1 J. T. Perkins, 200 ft. from NW cor. of lease, Thomas Stanford Sur., 8 miles S of Ponta	S.D. 2,250 ft.; (corrected).
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	S.D. 3,170 ft.

(Continued on Page 102)

3,637 feet; No. 5 R. G. Mason, top sand 3,613 feet, initial production 32 bbls. per hour through 2-inch tubing choke, total depth 3,696 feet. Mills Bennett, Inc.'s No. 6 Pinkston, top sand 3,570 feet, initial production 80 bbls. per hour through 2-inch tubing, total depth 3,640 feet.

Sinclair Prairie Oil Co.'s No. 6 Peter Tipps, top sand 3,632 feet, initial production 80 bbls. per hour through open 2½-inch tubing, total depth 3,654 feet. Snyder and others' No. 1 H. P. Leverett, top sand 3,806 feet, initial production 50 bbls. in 30 minutes through open 2½-inch tubing, total depth 3,808 feet; No. 1 H. P. Leverett, top sand 3,806 feet, initial production 50 bbls. in 30 minutes through open 2½-inch tubing, total depth 3,808 feet.

Stanolind and Pure Oil Co.'s No. 7 R. J. Burton, top sand 3,584 feet, initial production 49 bbls. in 15 minutes through 1½-inch tubing, total depth 3,565 feet; No. 11 W. H. Siler, top sand 3,597 feet, initial production 46 bbls. in 29 minutes through 1½-inch tubing choke, total depth 3,646 feet; No. 15 W. H. Siler, top sand 3,590 feet, initial production 46 bbls. in 24 minutes through 1½-inch tubing choke, total depth 3,635 feet. Stroube-Wheelock and Collins' No. 4 Pinkston, top sand 3,642 feet, initial production 75 bbls. per hour through open 2-inch tubing, total depth 3,685 feet. Clint Wood Drilling Co.'s No. 4 Irwin, top sand 3,809 feet, initial production 75 bbls. in 30 minutes through open tubing, total depth 3,810 feet.

Smith County

Amalagamated Oil Co.'s No. 3 S. S. Cooke, top sand 3,715 feet, initial production 33 bbls. in 10 minutes through 2-inch open tubing, total depth 3,718 feet. Arcadia Refining Co.'s No. 4-A Green, top sand 3,749 feet, initial production 50 bbls. per hour through five-eighths inch tubing choke, total depth 3,753 feet. McMahon-Moore and McCulloch's No. 4 S. S. Cooke, top sand 3,702 feet, initial production 75 bbls. in one-half hour through open 2½-inch tubing, total depth 3,710 feet. Mid-Kansas Oil & Gas Co.'s No. 22 M. M. Cross, top sand 3,632 feet, initial production 84 bbls. per hour through 2-inch tubing, total depth 3,637 feet; No. 5 J. H. Sharp, top sand 3,629 feet, initial production 128 bbls. per hour through 2-inch tubing, total depth 3,635 feet. Sinclair Prairie Oil Co.'s No. 6-B Jarvis, location abandoned. Sun Oil Co.'s No. 4 R. L. Henson, top sand 3,742 feet, initial production 30 bbls. per hour through open tubing, total depth 3,743 feet.

Upshur County

Acadia Refining Co.'s No. 2 A. O. Phillips, top sand 3,656 feet, initial production 30 bbls. per hour through open 2-inch tubing, total depth 3,672 feet. Cal-Petroleum Co.'s No. 4 Stinchcomb, top sand 3,718 feet, initial production 80 bbls. per hour through open 2-inch tubing, total depth 3,723 feet. Cranfill & Reynolds' No. 4 Williams, top sand 3,656 feet, initial production 15 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,664 feet. Evertts and others' No. 3 A. J. Sanders, top sand 3,604 feet, initial production 69 bbls. per hour through three-fourths inch tubing choke, total depth 3,635 feet. Galvez Oil Co.'s No. 3 Moore heirs, top sand 3,728 feet, initial production 75 bbls. per hour through open tubing, total depth 3,735 feet.

Humble Oil & Refining Co.'s No. 2-A Miller, location abandoned; No. 3 E. W. Smith, top sand 3,641 feet, initial production 76 bbls. per hour through three-fourths inch tubing choke, total depth 3,652 feet. Peckham Oil Co.'s No. 2 T. B. Webb, top sand 3,694 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,719 feet; No. 3 Webb, top sand 3,695 feet, initial production 125 bbls. per hour through 1-inch tubing choke, total depth 3,721 feet; No. 3 T. Webb, top sand 3,677 feet, initial production 60 bbls. per hour through 2-inch open tubing, total depth 3,712 feet. Pitten-Goldston and others' No. 1-A M. Bonner, top sand 3,632 feet, initial production 46 bbls. per day pinched, total depth 3,638 feet. Cap Roberts and others' No. 2 L. Jenkins, top sand 3,624 feet, initial production 75 bbls. per hour through open 2-inch tubing, total depth 3,657 feet.

Simms and Buttram's No. 10 W. R. Nicholson, top sand 3,656 feet, initial production 67 bbls. per hour through 2½-inch tubing, total depth 3,658 feet. Sloan & Cooper Drilling Co.'s No. 5 E. O'Byrne, top sand 3,669 feet, initial production 68 bbls. per hour through open 2-inch tubing, total depth 3,679 feet. Stanolind Oil & Gas Co. and others' No. 9-A Flewellen, top sand 3,649 feet, initial production 126 bbls. per hour through 2½-inch open tubing, total depth 3,672 feet. Stroube & Stroube's No. 1 Lofton, top sand 3,633 feet, initial production 46 bbls. per day pinched, total depth 3,639 feet. Twin Oil Co.'s No. 1 Bonner, top sand 3,657 feet, initial production 30 bbls. in one-fourth hour through 2-inch open tubing, total depth 3,667 feet. J. A. Wood and others' No. 5 J. H. Sheppard, top sand 3,659 feet, initial production 90 bbls. in one-half hour through 1-inch tubing, total depth 3,673 feet.

Van Zandt County

Pure Oil Co.'s No. 4 I. D. Miller, initial production 141 bbls. first 24-hour gauge after choked for proration, total depth 2,988 feet.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending July 23 follows:

	Bbls.
WYOMING	
Salt Creek	21,120
Big Muddy	1,650
Badger Basin	50
Byron-Garland	1,100
Dallas Derby	220
Dutton Creek	80
Elk Basin	490
Ferris	20
Frannie	130
Grass Creek	4,950
Greybull	0
Hamilton Dome	840
Hudson	420
La Barge	640
Lance Creek	80
Lost Soldier	1,910
Mule Creek	0
Midway	150
Notches	0
Oregon Basin	0
Osage	780
Pilot Butte	10
Rex Lake	0
Rock River	1,160
South Casper	0
Poison Spider	70
Teapot	30
Warm Springs	0
Total Wyoming	35,900
MONTANA	
Buckley-Border	540
Cat Creek	900
Dry Creek	840
Kevin-Sunburst	4,170
Lake Basin	40
Pondera	1,230
Total Montana	7,720
COLORADO	
Florence	270
Fort Collins and Wellington	770
Iles Dome	580
Moffat	700
Orchard	260
Rangely	80
Tow Creek	200
Total Colorado	2,860
NEW MEXICO	
Artesia	495
Caprock	912
Hogback	360
Jal	885
Rattlesnake	700
Table Mesa	80
Eunice	504
Hobbs	29,487
Lea	2,016
Texas-Pacific	95
Total New Mexico	35,030
Total Rocky Mountain area	81,510
Total previous week	79,930
Difference	1,580

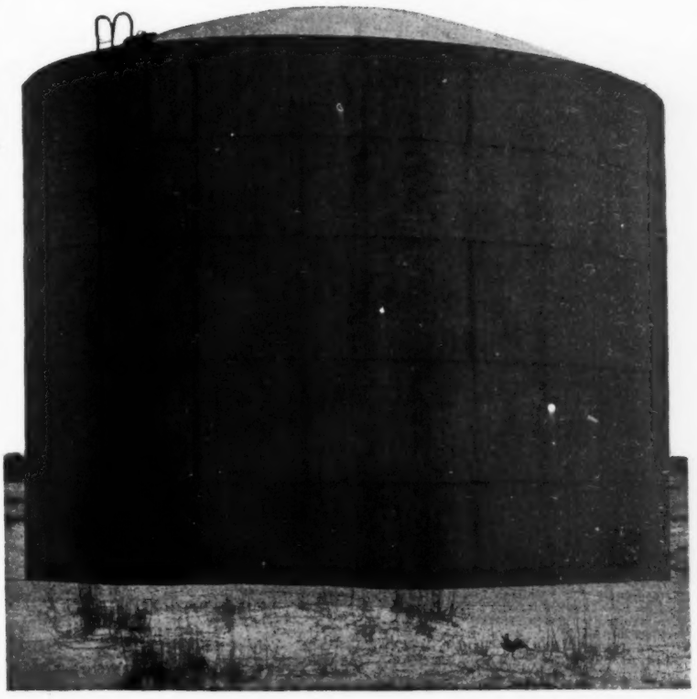
UNITED FUEL MEETING

CHATHAM, Ontario, July 23. — At their annual meeting recently, shareholders of United Fuel Investments, Ltd., of Hamilton, Ontario, a subsidiary of the Union Gas Co., re-elected the following directors: S. A. Morse, A. T. Leavitt, A. F. White, G. R. Cottrelle, G. H. Cassels, K.C., J. A. Fraser and R. H. Bevan.

GRAVER

BUILT *and* ERECTED

FIELD STORAGE



In Step with the Needs of the Industry

From field storage through refinery equipment to bulk and service station tanks, truck tanks and distributing accessories, Graver offers a comprehensive service. Graver engineers are trained to the Industry and to modern economies in design and erection. Graver manufacturing and fabricating facilities are unexcelled while production costs are low. Our field erection is recognized for its good workmanship. Graver experience and responsibility are long standing. Our representatives know the needs of the industry and work with you constructively. These facilities, this competent experience, we offer to aid the men who are working to carry the Industry upward to new heights.

GRAVER TANK & MFG. CORP.

General Offices and Plant: East Chicago, Indiana.

Nearly 75 Years in Steel Plate Fabrication

Next Gas Exploration to Be Centered in Ontario County, New York

BY SPECIAL CORRESPONDENT

CORNING, N. Y., July 23.—L. S. Panyity, well known geologist of Bradford, Pa., who recently announced plans for drilling for gas on a large leasehold in Ontario County, New York, will drill his first test in Bristol Valley, near Vincent, where already there are several old gas wells. The Mid East Gas Co. of Syracuse is interested with Panyity in the exploration of the 20,000-acre block. This territory has been known as gas producing for 30 years. Three wells have been drilled there within the past three years and they are said to have averaged between 1,000,000 and 1,500,000 feet per day per well in their early stages. Between Vincent and Honeoye about 30 gassers have been drilled.

J. Brooke Reed of Muskegon, Mich., has accumulated a block of 8,000 acres a little north of Canandaigua, in Ontario County, and will start a well 2 miles west of Shortsville. H. G. Burns & Son, now drilling a test on the Mauers farm, 2 miles from Geneva on the Lyons road, has 103 leases in a block of about 10,000 acres. Gas pipe lines have been transporting gas from the Bristol Valley area for a long time.

It was expected today that the work of drilling in G. H. Schrack's No. 1 Tassell, in Hebron Township, Potter County, Pennsylvania, which was a 20,000,000-foot gasser in the top of the Oriskany sand, would be started today. Great trouble has been experienced in getting this well under control. The Oriskany sand was found higher than anticipated. The Onondaga limestone was penetrated at 5,013 feet, but at 23 feet below the Oriskany sand appeared and the well at once became a roaring gasser. Exceptional equipment was brought into play to supplement the Halliburton process and get the well in condition where tools could be run.

The Allegany Gas Co.'s test on the Matteson farm in Hebron Township is below 4,300 feet, but it does not attract the attention of the J. Brooke Reed's test on the Champlin farm, which is drilling below 3,100 feet in the adjoining Allegany Township, and which, if it proves productive, will be an important extension to the Potter County's deep sand gas field, already with three big wells to its credit. In Hebron Township, Rogers and others have commenced drilling on the E. N. Clair farm and are below 500 feet. McGraw, Morrow and Metsner of Elmira, N. Y., are rigging up on the Cole farm, 2,600 feet east of G. H. Schrack's gasser.

In the Tioga County gas field in Pennsylvania, Goebel and others' No. 1 Burdette in Lawrence Township has been shut in as a 1,500,000-foot gas well. The Lycoming Natural Gas Co. has reached a depth below 2,600 feet in No. 1 Myron Finch in Farmington Township, and is drilling below 1,000 feet on No. 3 Farr in Lawrence Township. Mutual Natural Gas Co. is drilling at 2,610 feet on the Murray farm in Farmington Township.

The Hammondsport Natural Gas Co. has made a location on the Gale farm at Andrews settlement, Potter County. This is the company that is drilling the Medina sand test in Monroe County, New York, which was due when this was written.

Belmont Quadrangle Drilling Corp. of Bradford, Pa., is putting down a deep test for gas at Wirt, Allegany County, New York. The well will be drilled to 4,600 feet in an effort to tap the Oriskany.

East Central Texas Wildcats

(Continued from Page 99)

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablewich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur. ..... S.D. 3,733 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur. ..... Drlg. 2,890 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur. ..... S.D. 215 ft.
Armstrong Bros.' No. 1 Reeves ..... Waiting on cmt. to set 100 ft.
Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ..... S.D. 1,435 ft.
Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Wachatchie, E. C. Branch Sur. ..... Spudding.
Worthen Petroleum Co.'s No. 2 Cerf, Mulligan Farm Sur., 50 ft. W of No. 1 ..... Prepare to abandon; T.D. 2,395 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur. .. T.D. 3,290 ft. (corrected).

GREGG COUNTY

Arrow Drilling Co.'s No. 1 W. M. Borrough, 204 ft. from N line and 97 ft. from W line of lease, D. Moore Sur. ..... Set csg.; T.D. 3,540 ft.
Atlantic Oil Producing Co.'s No. 1 P. McGeorge, 330 ft. from S line and 330 ft. from W line of lease, P. McAnally Sur. ..... Derrick.
Brown Eagle Oil Co.'s No. 1 T.&P.R.R., 27 ft. N of center of R.R. block No. 9, H. R. Hokit Sur. ..... Set csg.; T.D. 3,620 ft.
D. M. Buffington's No. 1 Dansley, 500 ft. W and 200 ft. N of NE cor. of Searight Blackman 100-ac. lease, W. P. Chisum Sur. ..... S.D. 1,700 ft.
Burnham and Johnson's No. 1 H. L. Dansby, 850 ft. from E line of tract and 260 ft. from S line of lease, W. P. Chisum Sur. ..... Derrick.
L. C. Collins' No. 1 Cady Fisher, 330 ft. from S and W lines of 134.69-ac. lease, J. Rurrie Sur. ..... Location.
J. E. Davant's No. 1 Rowland, 180 ft. W and 450 ft. S of SW cor. of Magnolia's Roland lease, M. V. Winkle Sur. ..... Waiting on cmt. to set.
Delta Drilling Co.'s No. 1 Hughey-Ross, 330 ft. from N line and center of E and W lines of S 10-ac. lease, John Moffitt Sur. ..... Rig up.
Dodd and Markey's No. 1 J. P. Holt, 615 ft. E and 707 ft. N of SW cor. of 200-ac. tract, H. Edwards Sur. .. S.D. 2,025 ft.
Everett and Phillips' No. 1, Block No. 18, center of block, H. R. Hokit Sur. ..... Derrick.
Faith Oil Co.'s No. 2 Fuller, 330 ft. from N and W lines of lease, M. Alexander Sur. ..... Rig up.
Galvez Oil Co.'s No. 1 E. Strong, 280 ft. from N line and 286 ft. from E line of 50-ac. lease, J. Beaty Sur. ..... Rig up.
Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. .. Derrick.
Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, M. V. Winkle Sur. ..... Rig up.
Gulf Production Co.'s No. 1 S. G. Andrews, 330 ft. from N and E lines of lease, W. H. Hyde Sur. ..... Derrick.
Hankamer and Cockran's No. 1 C. L. Taylor, 235 ft. from N line and 97 ft. from E line of lease, W. H. Castleberry Sur. ..... Rig up.
D. W. Henke et al's No. 1 C. L. Taylor, 235 ft. from N line and 611 ft. from W line and center of lease, W. H. Castleberry Sur. ..... Waiting on cmt. to set 3,463 ft.
Humble Oil & Refining Co.'s No. 1 J. M. Adams, 330 ft. from N and W lines of lease, J. Ruddle Sur. .... Top sand 3,462 ft.; T.D. 3,476 ft.
Humble Oil & Refining Co.'s No. 1 J. R. Smith, 330 ft. from W line and 1,070 ft. from N line of lease, D. Sanches Sur. ..... T.D. 3,698 ft.
Humble Oil & Refining Co.'s No. 1 W. C. Mackey, 348 ft. from S line and 330 ft. from W line of 198.5-ac. lease, H. F. Rogers Sur. ..... Rig up.
S. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 155 ft. from river, E. A. Lambert Sur. ..... Derrick.
K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. ..... S.D. 700 ft.
Magnolia Petroleum Co.'s No. 1 M. Andrews, 330 ft. from N line and 368 ft. from E line of lease, J. Blair Sur. ..... Location.
Joe Manzeil's No. 1 Victory, center of Blk. No. 13, H. R. Hokit Sur. ..... Bldg. derrick.
Martin Wood Oil Co.'s No. 1 Nanny E. Walker, 94 ft. from N line and 85 ft. from W line of .84-ac. lease, M. Dillard Sur. ..... Derrick.
Lee Masters' No. 1 Mrs. F. Thompson, center of Blk. No. 151, M. V. Winkle Sur. ..... Plugged to 2,900 ft.; drlg. 3,160 ft.
McBride et al's No. 1 Tubbs, 330 ft. from N line and center of E and W lines of 6-ac. lease, D. Sanches Sur. ..... Derrick.
J. W. McCullough's No. 1 Elder, 275 ft. from S line and 185 ft. from W line of 11.64-ac. tract, M. V. Winkle Sur. ..... Derrick.
Munn et al's No. 1 I.&G.N.R.R., approximately 275 ft. SW along railroad from No. 2, M. V. Winkle Sur. ... Location.
John Murphy's No. 1 W. P. Crews, 436 ft. from E line and center of N and S lines of 2.35-ac. lease, I. Beaty Sur. ..... Rig up.
J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 148-ac. tract, D. Sanches Sur. ..... Location.
J. D. Patty et al's No. 1 J. C. McCormick, 267 ft. SE at right angles to Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Gregston, M. Dillard Sur. ..... S.D. 3,617 ft.
E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 21 ft. from W line of 2.13-ac. lease, H. R. Holit Sur. ..... Derrick.
Petroleum Finance Co.'s No. 1 C. C. Crews, W offset to Sinclair Prairie's No. 24 Cole, L. Perkins Sur. ..... Derrick.
Phillips et al's No. 1 Barcus, 300 ft. N of Magnolia's No. 5, D. Dainwood Sur. ..... Top sand 3,719 ft.; T.D. 3,722 ft.
Russell Petroleum Co.'s No. 1 Duncan, center of 1.28-ac. tract, Blk. 188, M. V. Winkle Sur. ..... Top sand 3,592 ft.; T.D. 3,594 ft.
J. M. Simmons' No. 2 Bacle, 180 ft. from N line and 85 ft. from E line of lease, G. W. Hooper Sur. ..... Moving in tools.
Swain and Holcomb's No. 1 R. M. Wood, 1,590 ft. from N and 375 ft. E of SW cor. of survey, H. R. Hokit Sur. ..... Spudding.
Tidal Oil Co.'s No. 1 J. S. and F. Elder, 202 ft. from S line and 150 ft. from W line of lease, M. V. Winkle Sur. ..... Derrick.
W. C. Turnbow, trustee's No. 1 J. N. Dixon, 330 ft. from E line of lease and 477 ft. N of Alexander and Rassmussan's No. 1 Dixon, I. Beaty Sur. ..... Derrick.
W. C. Turnbow's No. 1 Knowles, W offset to Everts' No. 2 Barton, M. V. Winkle Sur. ..... Set csg.
Winona Oil Co.'s No. 1 Sumi-Wells, 330 ft. from S and E lines of tract, 550 ft. from S line of survey, J. M. Morris Sur. ..... S.D. 2,500 ft.
Wyche Bros.' No. 1 Charles Arnold, 330 ft. from E line and cen. of N and S lines of 34-acre lease, Peter Holmes Sur. ..... S. D. 3,711 ft.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett, (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... Drlg. 2,720 ft.
H. H. Meyers' No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... Waiting on cmt. to set 102 ft.

HILL COUNTY

Sherman-Houseman's No. 1 J. F. Griffith, in Samuel Waddell Sur. ..... Fishing 3,256 ft.

HOPKINS COUNTY

Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ..... S.D. 540 ft.

HOUSTON COUNTY

Nelson's No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ..... Spudded and S.D. 37 ft.
T. B. Roberts' No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... T.D. 2,660-66 ft.

HUNT COUNTY

Chandler et al's No. 1 Mrs. A. Walker, 200 ft. from S line and 500 ft. from W line of most southerly SW cor. of tract and survey, J. P. Bowerman Sur. ..... Location.
Branson et al's No. 1 Gray ..... Location.
Russell et al's No. 1 Brooks and Quattlebaum ..... S.D. 1,465 ft.

KAUFMAN COUNTY

Standy Darnell et al's No. 1 Sally Pannill ..... Drlg. 2,350 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 450 ft. from W line of farm and survey, Galet Wood Sur. ..... Temp. abnd. 3,605 ft.
Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... S.D. 2,446 ft.
Doyle and Jondeau's No. 1 Horn, 2226 ft. from S line and 608 ft. from E line of lease, R. P. Mayor Sur. ..... T.D. 2,890 ft.; S.D.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... Location.

MORRIS COUNTY

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. ..... S.D. 3,554 ft.
Geo. L. Pace's No. 1 Walcott, 330 ft. from N and E lines of most northerly NE cor. of survey, 3 miles S of Carson, D. A. Russell Sur. ..... S.D. 48 ft.

NACOGDOCHES COUNTY

Adams et al's No. 1 Fuller Brothers, located in a 269-ac. tract, Jose Flores Sur. ..... Location.

POLK COUNTY

Collins and Plummer's No. 2 Collins, 7 miles SE of Livingston ..... S.D. 5,204 ft.
Taylor et al's No. 1 E. L. Duke, 330 ft. from N and W lines of 23.5-ac. tract, SW cor. of county, Peter J. Manard Sur. ..... Rig up.

RAINS COUNTY

C. H. Bayliss' No. 1 Ownby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Drlg. 4,595 ft.

RED RIVER COUNTY

Hoffman and Henson's No. 1 H. H. Lennox, 2,790 ft. W and 300 ft. S of most easterly NE cor. of survey, J. E. Edmondson Sur. ..... S.D. 60 ft.
Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Rigging up heavy rig to drill to 4,000 ft.

L. G. Priest's No. 1 W. C. Ware, 3½ miles SE of English, 987 ft. from most southerly S line and 150 ft. from most easterly E line of 103.2-ac. tract, James Burkham Sur. ..... S.D. 350 ft.

ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 130 ft.

RUSK COUNTY

Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,623 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.

D. D. Bruton's No. 1 R. A. Motley, center of 5-ac. lease, F. Cordova Sur. ..... Rig up.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... Drlg. 2,629 ft.

Florence Oil Co.'s No. 1 R. A. Motley, 330 ft. from N and E lines of 25-acre lease, F. Gordova Sur. ..... Running tubing; T.D. 3,817 ft.

Gant and Garwin's No. 1 W. P. Moore, 330 ft. S and E of SW cor. of Arkansas, W. P. Moore 40-ac. tract, M. V. Pena Sur. ..... S.D. 3,603 ft.

Graner Oil Co.'s No. 1 P. C. Warren, 700 ft. W of Cameron Oil Co.'s No. 1 Warren, John Womack Sur. ..... Top sand 3,796 ft.; T.D. 3,798 ft.

J. Guinn's No. 1 Neal Cooper, center of Blk. No. 36, T. J. Moore Sur. ..... Waiting on standard rig; T.D. 3,660 ft.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.

Hasting and Dodson's No. 1 E. B. Alford, center of Blk. No. 27, T. J. Moore Sur. ..... Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,519 ft.

Helden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... Waiting on cmt. to set 3,782 ft.

Hendershot et al's No. 1 Green Washington, 330 ft. from N line and 250 ft. from W line of 11.75-ac. tract, D. Clark Sur. ..... S.D. 2,400 ft.

H. H. Howells' No. 1 Gus Johnson, 330 ft. from S line and 330 ft. from W line of 31.84-ac. lease H. B. Dance Sur. ..... Drlg. 3,100 ft.

Humble Oil & Refining Co.'s No. 1 Oscar Robertson, 350 ft. from N line and 134 ft. from W line of 50-ac. lease, J. D. Clarke Sur. ..... Derrick.

T. A. Johnson's No. 1 H. B. Leverett, 200 ft. from N line and 222 ft. from W line of tract, J. Lindley Sur. ..... Set surface csg.

W. C. Know's No. 1 W. D. Peterson, center of 3.75-ac. tract, Jacob Lewis Sur. ..... S.D. 2,200 ft.; rig moved off

C. H. Lyons' No. 1 Deason, 150 ft. from S line and 150 ft. from W line of 33-ac. lease, M. J. Pru Sur. ..... Drlg. 3,685 ft.

Marr Drilling Co.'s No. 1 John Retting, 330 ft. from N line and 1,650 ft. from E line of tract, J. H. Sparks Sur. ..... Bldg. derrick.

Mid-Kansas Oil & Gas Co.'s No. 1 Peter Tipps, 330 ft. from N and W lines of lease, Peter Tipps Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 3 T. O. Warren, 330 ft. from S line and 583 ft. from E line of lease, J. B. De Cadena Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 1 M. A. Price, 210 ft. from N line of road and 330 ft. from W line of lease, J. B. De Cadena Sur. ..... Derrick.

Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,323 ft.

Sampson and Crane's No. 1 T. H. Gill, located on 10-ac. tract offset to Houston and Karona's No. 1 Patterson, R. W. Smith Sur. ..... Top sand 3,628 ft.; T.D. 3,629 ft.

Snider and Spradner's No. 1 Brightwell, 650 ft. from S line and 150 ft. from W line of lease, R. W. Smith Sur. ..... Derrick.

Sun Oil Co.'s No. 1 Jeff Hendon, 1,193 ft. from N line and 330 ft. from W line of lease, Juan Ximines Sur. ..... Drlg. 3,310 ft.

R. H. Vice's No. 1 Neal Cooper, 315 ft. SW along NW line of Cooper tract and 141 ft. SE at right angles, T. J. Moore Sur. ..... Waiting on standard rig 3,797 ft.

Watson and Butler's No. 1 G. W. Tipps, 330 ft. from S line and 600 ft. from W line of 18-ac. lease, H. M. Smith Sur. ..... S.D. 250 ft.

Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.

Webb Petroleum Co.'s No. 1 M. R. Terrell, 1,000 ft. from N line and 2,300 ft. from E line of survey, W. R. Cook Sur. ..... Coring 3,692 ft.

SMITH COUNTY

Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 150 ft. from E line of lease, J. Jordan Sur. ..... Derrick.

Hooper et al's No. 1 Lule Jackson, 330 ft. S and 530 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... Fishing for drill stem, T.D. 2,934 ft.

Joiner et al's No. 1 C. S. Jackson ..... S.D.; swabbed dry; T.D. 3,985 ft. (corrected).

Rabe et al's No. 1 Bateman, 332 ft. from S line and 278 ft. from E line of 15-ac. lease, James Jordan Sur. ..... Derrick.

F. L. Shackelford's No. 1 Lula Jackson, 384 ft. E along N line of Summitt Mayfield lease, from NW cor. and 357 ft. N at right angles, E. Daniels Sur. ..... Rig up.

Smith-Guerin and King's No. 2 S. S. Cooke, 180 ft. from N line of Blk. No. 8 and 580 ft. E of No. 1, Juan Vargas Sur. ..... Drlg. 2,950 ft.

Alph Tillman et al's No. 1 Jessie Cole, 137 ft. from E line and 375 ft. from N line of 32-ac. lease, center of 5-ac. lease, James Jordan Sur. ..... T.D. 3,680 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,211 ft.

UPSHUR COUNTY

Cranfill & Reynolds' No. 1 Laney Graves, 330 ft. from S and E lines of lease, M. Irwin Sur. ..... Moving in material.

Cranfill & Reynolds' No. 3 Williams, 330 ft. from S line and center of E and W lines of lease, McKinley and Williams Sur. ..... Drlg. 1,110 ft.

Grover Hart's No. 1 Allen, 330 ft. from S and E lines of lease, one-half mile W of Mountain, Gonzales Sur. ..... Derrick.

Hawkeye Petroleum Co.'s No. 1 L. L. Markey, 150 ft. from E line and center of N and S lines of 141.7-ac. tract, T. Hopkins Sur. ..... Setting csg. 3,749 ft.

Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1¼ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.

Lester and Duffield's No. 1 L. Graves, 169 ft. N and 330 ft. W of SW cor. of J. McRae Sur., M. Irwin Sur. ..... Location.

Pitts et al's No. 1 H. Davis, center of 7.5-ac. lease, W. R. Stephens Sur. ..... Derrick.

H. K. Spear's No. 1 D. Bruner, 700 ft. W and center of N and S lines of 5-ac. lease, M. Chandler Sur. ..... Location.

Steen Drilling Co.'s No. 3 Loden, 330 ft. from E line and center of N and S lines of 27.2-ac. lease, G. W. Hooper Sur. ..... Derrick.

Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ..... Rig up.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. DeCadena Sur. ..... S.D. 2,405 ft.

Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.

Pure Oil Co.'s No. 9 Ella York, 250 ft. S of N line and 200 ft. W of E line of tract, John Walling Sur. ..... Testing 2,929 ft.

Pure Oil Co.'s No. 5 A. W. Ellison, 710 ft. S of N line and 700 ft. W of E lines of lease, James Rose Sur. ..... Cmt. setting 318 ft.

Pure Oil Co.'s No. 3 Mrs. C. White, 250 ft. S and 250 ft. W of NE cor. of lease, John Walling Sur. ..... Drlg. 973 ft.

A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ..... Location.

Van Oil Association's No 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur. ..... S.D. 210 ft.

W. B. Saulsbury's No. 1 T. H. Peters, 600 ft. from S line and 200 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. ..... Bldg. derrick.

Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... T.D. 3,500 ft.

Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. ..... T.D. 2,070 ft.

Wildcat Operations in West Texas

(Continued from Page 98)

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R Sur. ..... Shut down

ECTOR COUNTY

Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur. ..... Drlg. 150 ft.

L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ..... S.D. 10 ft.

Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur. ..... Fsg. 3,200 ft.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. ..... S.D. 3,665 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 264, S.P. No. 7,247 ..... Drlg. 2,860 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 330 ft. from E. Sec. 200, Blk. 1, B.B.B.&C. Sur. ..... S.D. 5,816 ft.

Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. ..... Drlg. 1,313 ft.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G ..... T.D. 3,087 ft.; running 8-in. csg.

GLASSCOCK COUNTY

California Co.'s No. 1 O'Byrne, 2,310 ft. from S. 1,650 ft. from E. Sec. 23, Blk. 33, Twp. 2-s. T.&P. Sur. ..... S.D. 1,473 ft.

Continental Oil Co.'s No. 2 Hart-Phillips, 660 ft. from N. 1,980 ft. from W. Sec. 24, Blk. 33, Twp. 2-s. T.&P. Sur. ..... Location.

B. C. Mann's No. 1 Moore, C NE. Sec. 11, Blk. 35, Twp 3s, T.&P. Sur. ..... Drlg. 180 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N. 1,884 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. ..... S.D. 185 ft.

Amerada Pet. Corp.'s No. 4 Coffee, 1,300 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33, Twp. 2s, T.&P. Sur. ..... T.D. 2,086 ft.; standardizing.

Amerada Pet. Corp.'s No. 5 Coffee, 2,310 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33 ..... Cmtd. csg. 93 ft.

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. Spudded and S.D

Merrick & Lamb's No. 4 Chalk, 1,650 ft. from N and 990 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur. ..... S.D. 975 ft.

Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... S.D. 1,030 ft.

Sinclair-Prairie Oil Co.'s No. 2 Dodge, 2,313 ft. from S and 300 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... T.D. 2,794 ft.; putting on pump.

Sinclair-Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Rigged up machine.

IRION COUNTY

Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... S.D. 7,543 ft.; drlg. out plug.

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... S.D. 7,420 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp. abnd

Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Spudded and S.D

J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E. I. Miley Sur. ..... Drlg. 2,315 ft.

Robert Oil Co.'s No. 1 Swann, 2,350 ft. from W and 2,920 ft. from S. I. Miley Sur. ..... T.D. 2,280 ft.; underreaming 8-in. csg.

Smart & Reynolds' No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3. S.D. 175 ft.

Southern Oil Co.'s No. 1 Sears, 300 ft. from S and W J. H. Grayson Sur. ..... Drlg. 1,085 ft.

C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... S.D. 1,751 ft.

Transcontinental Prod. Co.'s No. 1 Rust, 5,800 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 ..... Spudded.

Ungren & Frazier's No. 2 King, 465 ft. from N. 150 ft. from E. Subd. 6, M. Bueno Sur. ..... Rigging up.

Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 3, O.A.L. Sur. ..... Location.

LOVING COUNTY

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S. Sec. 46, Blk. 53, T.&P. Sur. ..... S.D. 810 ft.

Fair Lawn Syndicate's No. 1 Brookfield, 330 ft. from N and W, Sec. 30, Blk. 29, P.S.L. ..... Drlg. 3,000 ft.

Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... S.D. 1,650 ft.

Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1. T.&P. Sur. ..... S.D. 2,280 ft.

Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Rig.

Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.

Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... T.D. 3,660 ft; straightreaming csg. at 2,760 ft.

Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 1,300 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 10 G.&G.N. Sur. ..... Drlg. 100 ft.

Aero Gas & Royalty Co.'s No. 2 Byrne, 1,470 ft. from NW and 1,500 ft. from SW, Sec. 54, Blk. 10, H.&G.W. Sur. ..... Drlg. 740 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Culberson Bros.' No. 12-B Monroe, 1,042 ft. from N, 260 ft. from E of center line, Sec. 39, Blk. 194, G.C.&S.F. Sur. ..... T.D. 494 ft.; to set csg.
Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. ... S.D. 1,395 ft.; T.P. 1,356 ft.
New State Oil Co.'s No. 1 Tippett, 1,349 ft. from S and 330 ft. from E. Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... S.D. 1,225 ft.
Steed Prod. Co.'s No. 1 Monroe, 150 ft. E. 300 ft. N of SW cor. of lease, Sec. 39, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 500 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,000 ft. from E. Sec. 12, Blk. 2 ..... T.D. 8,367 ft.
Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Drlg. 6,340 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 5,125 ft.

REEVES COUNTY

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. .. Drlg. 1,752 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 250 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... T.D. 2,522 ft.; T.P. 2,520 ft.; estm. good for 250 bbls.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft., S.D. 3,4xx ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sub. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... S.D. 1,530 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,875 ft.

TAYLOR COUNTY

Dunigan et al's No. 2 Hunter, 2,387 ft. from N and 3,567 ft. from E of Sec. 27, W. R. Wills Sur. No. 122. Skidded rig 40 ft. west; spudded new hole.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D. M.-K.-T. Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... Fsg. 2,440 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 735 ft
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 320 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft

UPTON COUNTY

Farley et al's No. 3 Lane, 1,650 ft. from S and 330 ft. from W, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Drlg. 2,070 ft.
Hope Pet. Co.'s No. 2 Lane, 2,310 ft. from N, Sec. 36, Blk. 1, M.K.&T. Sur. ..... Drlg. 220 ft.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 .I.&G.N Sur. ... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ..... S.D. 6,780 ft

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Fishing 2,265 ft.
Abell Bros.' No. 2 Smith, 2,310 ft. from SE and 2,020 ft. from NE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,650 ft.
Abell Bros.' No. 3 Smith, 2,310 ft. from NE and NW, Sec. 4 ..... T.P. 2,351 ft.; drlg. 2,375 ft.
Barnsdall Oil Co.'s No. 2 Henry, 990 ft. from SE and 330 ft. from NE, Sec. 28, Blk. B-29, P.S.L. Sur..... Material on ground.
Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 26, H.&T.C. Sur., Blk " ..... Fsg. 2,205 ft.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Drlg. 385 ft.
Eastland Oil Co.'s No. 1 Green, 2,364 ft. from NW and 2,310 ft. from SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,490 ft.
Eastland Oil Co.'s No. 2 Weiss, 1,728 ft. from SW and 2,365 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. ... Location.
Eastland Oil Co.'s No. 1-A Weiss, 2,364 ft. from SE, 333 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Location.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Production Co.'s No. 22 O'Brien, 1,100 ft. from N and 330 ft. from E, Sec. 16, Blk. F, G.M.M.B.&A. Sur. ..... T.D. 1,285 ft.; running 8¼-in. csg.
Gulf Prod. Co.'s No. 12 Hutchings, 320 ft. from N, 990 ft. from W, Sec. 3, Blk. F ..... Rigged up.
Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 12, Blk. 14, H.&T.C. Cur. ..... S.D. 2,445 ft.
Moran & Burkhart's No. 2 J. T. Sweatt et al, 3,810 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 2,232 ft.; estm. 15 bbls. oil per day.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 1,900 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,155 ft.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec 36, W &N W R.R. Sur., Blk. 1 ..... Drlg. 3,850 ft.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE. Sec. 62, Blk. 33, H.&T.C. Sur. ..... Rigged up.
Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Drlg. 2,030 ft.
T P. Coal & Oil Co.'s No. 4 James, 330 ft. from NE and 2,365 ft. from SE, Sec. 5, Blk. 34, H.&T.C. Sur. ..... T.D. 410 ft.; ran 1½-in. csg.
Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... T.D. 1,435 ft.; underreamed 8¼-in. cs. at 1,190 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Sid Richardson et al's No. 1 Scarborough, 1,650 ft. from N and W, Sec. 1, Blk. 77, P.S.L. Sur. ..... Cellar.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... Cellar.

Wildcat Operations in Texas Panhandle

(Continued from Page 98)

Danciger O. & R. Co.'s No. 3 Williams, 150 ft. from N, 1,650 ft. from W S half NW, Sec. 7, Blk. 1, A.C.H.& B. Sur. ..... Drlg. 2,425 ft.
Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Building rig.
Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec. of Blk. 26, H. &G.N. Sur. ..... S.D. 2,900 ft.
Gulf Prod. Co.'s No. 7 Saunders, 330 ft. from N and W, SW, Sec. 40, Blk. 3, I.&G.N. Sur. ..... Drlg. 625 ft.
Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W. NW SW, Sec. 106, Blk. 3, I.&G.N. Sur. ..... Fishing 3,325 ft.
Kewanee O. & G. Co.'s No. 1-C Adams, 330 ft. from S and E. Sec. 3, Blk. 26, H.&G.N. Sur. ..... Rigging up cable tools.
Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W. Sec. 3, Blk. 26 ..... Cellar.
Mazda-Shell's No. 2 Worley Reynolds, 660 ft. from S and E of NE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,875 ft; 37,000,000 ft. gas 2,730 ft.
Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ..... Fishing 2,635 ft.
Naboh Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE. Sec. 67, Blk. 25, H.&G.N. Sur. ..... T.D. 2,623 ft; 500 ft. oil in hole.
Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... Drlg. 2,370 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... Spudded.
Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E. Sec. 173, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,767 ft.
Pulse-Shell's No. 1 Brown, 290 ft. from N, 250 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur. ..... Rig.
Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,375 ft. and shoot.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Location.
Tedesco Oil Co.'s No. 3 Morse, 330 ft. from N and E of NE SW, Sec. 1, Blk. 26, H.&G.N. Sur. ..... T.D. 2,515 ft; no gauge.
The Texas Co.'s No. 4 Bull, 1,65 ft. from S, 330 ft. from W, Sec. 2, Blk. B-2, H.&G.N. Sur. ..... Drlg. 2,375 ft.
The Texas Co.'s No. 5-B McLarty & Lester, 990 ft. from N line, 950 ft from W line, Sec. 2, B.&B. Sur. ..... Drlg. 2,065 ft.
The Texas Co.'s No. 10 Cook-Faulkner, 330 ft. from S, 1,605 ft. from W, Sec. 29, Blk. B-2, H.&G.N. Sur..... Drlg. 820 ft.
The Texas Co.'s No. 10 Williams, 150 ft. from S, 1,650 ft. from W, Sec. 7, Blk. 1, A.C.H.&B. Sur. ..... T.D. 2,600 ft; ran 8-in. csg.
Thorp et al's No. 1 Short, 330 ft. from N and E, Sec. 2, Blk. 1, H.&G.N. Sur. ..... Drlg. 925 ft.
Tripplehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... Drlg. 320 ft.
Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Rig.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... Shut down.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E. G. S. Hood Sur. ..... To deepen old well; T.D. 5,055 ft balling hole.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E. in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 3,080 ft.; estm. 5 or 10 bbls. may plug.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. .. S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur. ..... S.D. for repairs 2,947 ft.
Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur. ..... Drlg. plug 2,935 ft.
Huber Pet. Co.'s No. 2 Christian, 330 ft. from S and E. SW. Sec. 33, Blk. Y, A.&B. Sur. ..... Rig on ground.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E. Sec. 4, Blk. 1, B.&B. Sur. ..... Plugged back to 3,146 ft.; S.D
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 680 ft. from E. Sec. 24, Blk. M-22, T.C.R.R. Sur. ..... Rig.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.
Rock Creek Oil Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E-half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... Rig.
Steckol Prod. Co.'s No. 3-D Whittenburg, 330 ft. from S and 990 ft. from W, Sec. 38, Blk. M-23, T.C.R.R. ..Rigging up standard tools.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... S.D. 240 ft.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Rig up.
Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur. ..... Drlg. 2,875 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .. Rig.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur. ..... Drlg. 3,925 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Cmtd. cave 4,090 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft; swabbed 43 bbls. in 3 hrs.

Area 15 Miles Northeast of Oklahoma City Field Will Be Tested by the Sinclair Prairie Co.

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

The most interesting area in Oklahoma is the territory surrounding the wildcat test of Sinclair Prairie Oil Co., No. 1 Kennedy, C SE NW, Section 4-13-1w, Oklahoma County. It is located about 15 miles northeast of the Oklahoma City Field.

Cellar and pits were being dug at the location and water and gas lines were under construction. Material for the rig and machinery is expected to be moved in in a few days.

Oklahoma production staged a 47,500-bbl. increase as an average for the week ending July 23. The daily average for the seven days was approximately 453,850 bbls. a day. Most of the increase was from the Oklahoma City Field.

Russell Petroleum Co.'s No. 1 Russell Community, N half SE NE NW, Section 22-11-3w, Oklahoma City Field, which was bailed dry at a total depth of 6,581 feet, has been shut down. Some doubt was expressed as to whether the test has reached the Wilcox sand at this depth. It is a west offset to the Denver Producing and Refining Co.'s No. 1 Larkins, which made 1,778 bbls. of oil in four hours on a recent potential test. The Russell test is in the southwest end of the field and may indicate that the producing limit of that part of the field has already been reached.

Paying for Proration

Payment has been made by some of the companies that heretofore have not supported the proration movement. No payments have been made under protest, as yet, but a few of the independent operators have asked for an extension of the time limit, since they claim they will be without funds until payment is made for crude oil sold during the month. Time has been extended for several of the independent operators, and companies in receivership, because of the litigation involved. The penalty for refusal to pay is shutting down the wells under Governor Murray's executive order.

There is a possibility that Governor Murray may issue an executive order shutting down all the alleged violators of proration in the Oklahoma City Field. Something definite may be determined after the hearing by the State Supreme Court on the appeal of Wilcox Oil & Gas Co.

The majority of operators with production in the Oklahoma City Field are opposed to such measures, including the military occupancy of the field but these stringent measures are believed to be necessary to handle the situation. None of these operators is planning to take any action against the State or the governor, except H. F. Wilcox Oil & Gas Co.

With the selection of three active operators in the Oklahoma City Field, as members of the proration board, the governor has the benefit of advice from men who are in constant touch with the operations in the field and with the state situation as well.

The present proration board consists of Lieut. Col. Cicero I. Murray, chairman; R. G. Rapp, of the Denver Producing & Refining Co., representing the independent producers; E. D. Guidinger of the Phillips Petroleum Co., representing the pipe line companies, and Wirt Franklin of the Wirt Franklin Petroleum Corp., representing the refiners. There is no proration umpire in the Oklahoma City Field and many believe as long as the military forces remain in the field none will be appointed.

New Oklahoma City Wells in Field

Two wells were added to the northwest portion of the Oklahoma City Field early in the week. Slick-Urschel's No. 7 Terminal, SE cor. NW, Section 3-11-3w, flowed 685 bbls. of oil in 11 minutes and was then shut in. It flowed through a 5-inch choke which is expected to be replaced with a smaller one during the week. The well is producing from a total depth of 6,429 feet with 9-inch casing landed at 6,322 feet. This producer completes the company's drilling campiagn on this lease.

Phillips Petroleum Co.'s No. 1 Gentry, NW cor. SW NE, Section 3-11-3w, flowed 238 bbls. of oil in 30 minutes through a 3-inch choke and the gas was estimated at 7,500,000 feet a day. The well was shut in and a larger choke will be installed before the next production test is made. The total depth of the well is 6,435 feet and the 9-inch casing is landed at 6,291 feet.

The Indian Territory Illuminating Oil Co.'s No. 1 G. Lord, SE cor. NE NE, Section 35-11-3w, in the south end of the field, flowed 1,257 bbls. of oil in four hours on a potential test. The total depth of the well is 6,570 feet, with the 6-inch casing landed at 6,551 feet. On its initial test the well flowed 2,683 bbls. of oil in eight hours.

In the north end of the field Wirt Franklin Petroleum Corp.'s No. 2 B. Theimer, NE cor. SE, Section 2-11-3w, has been completed for 35,000,000 feet of gas a day, after being shut down for two years and reconditioned. The total depth of the well is 6,326 feet and the 6-inch casing was landed at 6,115 feet. When the well was first completed it made some water and refused to flow. Some believed it was located on a fault.

In the extreme south end of the field Indian Territory Illuminating Oil Co.'s No. 1 Miller, NE cor. NW, Section 35-11-3w, an extension well, swabbed 100 bbls. of oil in two hours while testing the well before starting to plug back, from a total depth of 6,685 feet. It also had some water.

The Oklahoma Corporation Commission announced that the following wells which have been on the underproduced list are now incapable of producing the underproduced oil credited to them, and they are therefore charged off and cancelled: Indian Territory Illuminating Oil Co.'s Nos. 3, 6 and 7 Trosper and others; Continental Oil Co.'s No. 1 V. Sudik; Champlin Refining Co.'s No. 2 Seal.

The following wells were allowed until July 27 to determine whether they will be able to make up their underproduction, or whether the underproduction should be cancelled: Anderson & Prichard's No. 1 Graham and No. 1 Orphanage; Indian Territory Illuminating Oil Co.'s No. 4 Spillman; Scott & Co.'s No. 1 Ashby, and Indian Territory Illuminating Oil Co.'s No. 6 H. G. Trosper.

The commission also cancelled the underproduction from the Argood Oil & Gas Co.'s No. 1 Catalina, and the J. H. Peacock's No. 1 Sheppard, and declared the wells to be even.

Tests Show Big Production

On a second production test Phillips Petroleum Co.'s No. 1 Gentry, NW cor. SW NE, Section 3-11-3w, Oklahoma City, increased its production. It made 7,865 bbls. of oil in 3½ hours, which is at the rate of 55,000 bbls. a day. The well was produced through a 6-inch choke with 100 pounds back pressure. The gas was estimated at 50,000,000 feet a day. When completed, a few days earlier, it flowed 238 bbls. of oil in 30 minutes through a 3-inch choke. The total depth of the well is 6,435 feet and the 9-inch casing is landed at 6,291 feet.

Anderson-Kerr and others' No. 1 Gallagher, SW cor. NW SE, Section 22-11-3w, in the southwest part of the field, flowed 1,302 bbls. of oil in 45 minutes with an estimated 45,000,000 feet of gas a day. The total depth of the well is 6,568 feet with the 9-inch casing landed at 6,445 feet.

Slick-Urschel, Inc.'s No. 13 Classen-Edwards, NE cor. SW, Section 3-11-3w, flowed an estimated 2,700 bbls. of oil in one hour before being shut in. It was expected to be tested again the first of the week. The total depth of the well is 6,435 feet and the 9-inch casing is landed at 6,321 feet.

The wildcat test of Amerada Petroleum Corp. and Stanolind Oil & Gas Co., No. 1 Penny, SW cor. NW SE, Section 25-19-4, Payne County, was preparing to plug back to the upper formations after finding water in sand at 3,816-27 feet, and only a trace of oil. The owners intend to test the Simpson formation at 3,750-57 feet, where a showing of oil was found. This well was drilled after a seismograph survey of the area.

In County Line Pool

The County Line Pool, along the boundary of Lincoln and Creek Counties, is gaining in activity. Another producer was added to the area during the week and a new location was announced. This pool is an old gas producing area where recently old gas wells have been drilled deeper into the Wilcox sand for oil production.

The new producer is H. D. Truax and others' No. 1 Wolfe, NE cor. NW, Section 12-15-6, Lincoln County. The well was drilled deeper from an old total depth of 3,647 feet to a total depth of 3,695 feet where it is now making 27 bbls. of oil an hour with approximately 21,000,000 feet of gas a day. This is the fourth producing oil well in the pool, all of which are shut in awaiting a pipe line outlet.

Pure Oil Co.'s No. 1 Steele, NE cor. SW, Section 6-15-7, has been cleaned out to the bottom of the hole at 3,625 feet and was preparing to core. The three other completed wells in the area are the Pure Oil Co.'s No. 1 Oglesby-Pinkston, in Section 1-15-6, Lincoln County, which is estimated at 800 bbls. a day. Stanolind Oil & Gas Co.'s No. 1 Bowers, in Section 1-15-6, Lincoln County, and Gypsy Oil Co.'s No. 1 Pinkston in Section 1-15-6. None of these wells has had a chance to make a production gauge. These wells were formerly gas wells and were recently drilled deeper into the Wilcox sand.

Some express the opinion that the potential production of these four wells is approximately 5,000 bbls. a day. A recent order issued by the Corporation Commission, placed the wells in the wildcat class and allows them to produce 50 bbls. a day each.

A new location, W. H. Atkinson and others' No. 1 King, SW cor. NE, Section 31-16-7, across the line in Creek County, is a rig on the ground and some tools. This location is about a half mile north of the Pure Oil Co.'s No. 1 Steele.

Oil activity in southern Oklahoma continues steady with Stephens County in the lead. Two producers were added to the field, and three locations were announced during the week. A total of 14 operations were listed in Stephens County. Most of the operations were in the south Duncan, Oil City and Comanche areas.

G. L. Pace's No. 14 A. Watkins, NE cor. SE, Section 21-2s-7w, a mile east of Comanche, made 100 bbls. of oil from sand topped at 1,738 feet. W. J. McCalister and others' No. 1 Dare, SW cor. SW NW, Section 1-2s-8w, in the field southwest of Duncan, was completed for 50 bbls. of oil from sand topped at 1,462 feet.

T. W. Medlin and others' No. 1 Wade, NW cor. NW NE, Section 11-2s-8w, was abandoned at a total depth of 2,161 feet. This test offsets the same operators' No. 1 Moore, recently completed for 75 bbls. a day.

G. L. Pace's No. 2 Bristow, NE cor. SE SE, Section 18-2s-7w, north of Comanche, was completed as a dry hole at a total depth of 1,927 feet. New locations made during the week include the following: G. L. Pace's No. 7 B. Watkins, NW cor. SE SW, Section 22-2s-7w, located a mile east of Comanche; Perry and others' No. 1 L. McPhail, SW cor., Section 14-2s-7w, northeast of the Watkins Field; and P. L. Gilbert and others' No. 3 Green, SE cor. NE, Section 2-2s-8w, in the area 5 miles south and 2 miles west of Duncan.

The first day's potential tests in the West Seminole area in the Greater Seminole district indicate that the old potential figure of 7,000 bbls. will be a little low for the area. The total production for the first day's gauge was 9,484 bbls. from six wells. The production by leases was as follows: Gypsy Oil Co.'s No. 1 Pompey, in Section 29-9-6, made 2,593 bbls. in 24 hours; The Texas Company's Sandlin lease, in Section 29-9-6, with two wells, 2,671 bbls.; Amerada Petroleum Corp.'s Chase lease, in Section 29-9-6, two wells, 3,812 bbls. in 24 hours; and Amerada Petroleum Corp.'s Morris lease, in Section 29-9-6, one well, 408 bbls.

Carter County

Shermerhorn Ardmore Oil Co.'s No. 9 Wilson, SW cor. NE SW Section 23-4s-3w, made 15 bbls. after a 40-quart shot at 1,090-1,128 feet. Smith and others' No. 1 Thompson, SE cor. NW NE SE Section 17-3s-4w, was abandoned at 838 feet. Lundy and Murphy's No. 1 McConnell, SW cor. SE SW Section 13-1s-3w, is a rig. Rob and others' No. 2 Burton, SW cor. NE Section 31-1s-2w, is a rig. E. M. Boring and others' No. 1 Wolfe, SE cor. NE Section 13-1s-3w, was abandoned at 2,631 feet.

Coal County

Funk and Russell's No. 1 Miller, SE cor. NE Section 10-2-8, was drilling at 2,395 feet.

Creek County

Johnson and others' No. 4 Bible, NE cor. SE SW Section 20-19-9, is a location. Gled Oil Co.'s No. 3 Boyd, SW cor. NE NW Section 26-19-9, is a rig. Big Four Petroleum Co.'s No. 1 Gilbreath, NW cor. SW Section 31-19-9, is a rig. A. W. Swift and others' No. 2 Conrod, NW cor. SW Section 3-19-9, was drilling at 300 feet. Link Oil Co.'s No. 15 Mickey, NE cor. SE NW Section 33-18-7, was drilling at 400 feet. Smith and Williams' No. 1 Tiger (twin), NE cor. SE SE Section 28-16-9, is a rig. Same oper-

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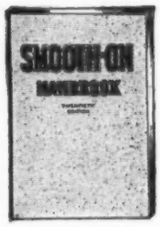

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ators' No. 1 A. Tiger, SW cor. NE Section 27-16-9, made 60 bbls. of oil from 2,538-48 feet. Baltzell and others' No. 5 Land, NW cor. SW NW Section 12-18-11, made 5 bbls. from 2,045-56 feet. Frod Production Co.'s No. 3 Littlehead, CWL SW SE Section 17-17-10, was completed for 5 bbls. from 2,105-92 feet. Curtis Oil Co.'s No. 1 Self, C SW NW Section 22-17-10, was completed for 4 bbls. from 521-45 feet. W. H. Atkinson's No. 1 King, SW cor. NE Section 31-16-7, is a location. Sherry-Murta-Carter Oil Co.'s No. 7 Wilson, SE cor. NW NW Section 32-17-12, is a location. Holmes Oil Co.'s No. 1 Graves, NE cor. NW SE Section 30-19-10, is a rig. Windsor and others' No. 1 Hinton, SE cor. NW Section 25-19-8, made 120 bbls. after 110-quart shot at 2,362-98 feet. Elliott and Shell Petroleum Corp.'s No. 2 Beardsley, SE cor. NE SE Section 18-19-9, made 77 bbls. of oil after 180 quart shot at 2,175-2,224 feet. Michigan Petroleum Co.'s No. 1 Doty, NW cor. SE Section 1-18-7, made 15 bbls. at 2,620-50 feet. B. Swift and others' No. 1 Smith, C N half SW NW Section 16-18-9, made 20 bbls. after 140-quart shot at 2,418-26 feet. Wilson Petroleum Co.'s No. 6 Bucktrot, C NW NW Section 35-17-10, was completed for 750,000 feet of gas from 2,292-2,300 feet. Reasor and others' No. 1 Keifer, C SE SW Section 29-17-12, was abandoned at 2,430 feet. Willrough Oil Co.'s No. 1 O.U.R., SW cor. NE NW Section 32-17-12, made 125 bbls. of oil from 2,400-21 feet. Seth Herndon and others' No. 1 Harrison, NW cor. SE SW Section 18-14-9, was abandoned at 2,412 feet.

Grady County

Schoonmaker and others' No. 1 Staton, NW cor. Section 35-4-7w, was abandoned at 2,685 feet.

Comanche County

T. E. Bradley and others' No. 1 Pruitt, NE cor. SW SE Section 8-1-9w, was abandoned at 1,701 feet.

Cotton County

Shasta Oil Co.'s No. 1 Carey, NE cor. SW SW Section 18-1s-9w, is a rig. Wilson and Kennette's No. 1 Wilson, SW cor NW NW Section 6-2s-9w, was abandoned at 2,196 feet.

Hughes County

Burke-Greis Oil Co.'s No. 1 Doria, NW cor. Section 29-7-8, was digging the cellar. Tremire Oil & Gas Co.'s No. 1 Hampton, NE cor. NW NE Section 20-8-10, is a location. Milam and Capshaw's No. 1 Holmes, SE cor. SW SW Section 11-7-8, is a machine. Gertner and others' No. 1 Holmes, SW cor. Section 11-7-8, is a location.

Kay County

Harris and Haun and others' No. 2 Grose, SW cor. SE Section 17-29-1, old well drilling deeper, was drilling at 3,353 feet. Old total depth 3,335 feet.

Jefferson County

O. V. Beck's No. 3 W. Seary, SW cor. SE NW SE Section 34-6s-5, is a location. Same operators' No. 4 Seary, NW cor. NE SW SE Section 34-6s-5w, is a rig on the ground. Goodard Oil Co.'s No. 8 Marshall, SE cor. NW SE Section 30-5s-6w, is a machine.

Lincoln County

Hilton Phillips and others' No. 1 Phillips, SW cor. NW Section 2-14-3, was abandoned at a total depth of 5,080 feet. Mote and others' No. 1 School Land, NW cor. Section 36-17-5, was abandoned at 4,024-37 feet.

Muskogee County

Robison and others' No. 5 Brown, CEL NW SW Section 17-13-16, was spudding. E. Price's No. 1 Moore (twin), SW cor. NW SW Section 13-14-16, made 25 bbls. of oil after a 60-quart shot at 1,463-1,525 feet.

Marshall County

Davidson Petroleum Co.'s No. 1 Durham, SE cor. SW NW Section 3-7s-6, is an abandoned rig. J. Taylor and others' No. 2 Arbuckle, SW cor. Section 25-5s-5, was drilling at 300 feet. F. A. Turner's No. 1 Arbuckle, NE cor. SE SW SW Section 25-5s-5, was spudding. White Oak Oil & Gas Co.'s No. 1 Burge, NE cor. SE Section 25-7s-5, made 1 bbl. of oil from 516-38 feet, total depth 585 feet. Cooper & Wickliff's No. 1 Massey, SE cor. SW SE Section 29-6s-6, was abandoned at 896 feet.

Okmulgee County

J. H. Rebold and others' No. 1 Carter, SE cor. SW SW Section 15-13-12, is a rig. G. L. Reasor and others' No. 1 Raysdale, SW cor. NE SE Section 30-14-12, was drilling at 150 feet. Bryan Petroleum Co.'s No. 1 Carberry (twin), SE cor. SW Section 23-14-14, was drilling at 607 feet. Cole and Claypool's No. 1 Banks, NE cor. NW SE Section 5-13-12, old well drilling deeper, was rigging up, total depth 725 feet. J. E. Wallace's No. 1 Colbert (twin), SW cor. NW NW Section 14-14-14, made 6 bbls. from 1,762-77 feet.

Osage County

City of Pawhuska's No. 23 well, NW cor. Section 25-26-8, is a rig.

Oklahoma County

Sinclair Prairie Oil Co.'s No. 1 Kenney, C SE NW Section 4-13-1w, is a rig on the ground. Indian Territory Illuminating Oil Co.'s No. 1 Wisel, SW cor. SE SE Section 26-11-3w, was digging the cellar. Wirt Franklin Petroleum Corp.'s No. 2 Theimer, NE cor. SE Section 2-11-3w, was completed 35,000,000 feet of gas a day from 6,115-6,326 feet. Skelly Oil Co.'s No. 1 Moon, NW cor. SW NE Section 22-11-3w, made 1,296 bbls. of oil from 6,489-6,560 feet. Refiners Production Co.'s No. 1 M.-K.-T., SE cor. SW SE Section 34-12-3w, made 4,313 bbls. of oil in four hours from the Wilcox sand at 6,318-6,487 feet. Denver Producing & Refining Co.'s No. 1 Johnson, C NW NE Section 22-11-3w, was completed for 1,778 bbls. of oil in four hours from 6,475-6,540 feet. Indian Territory Illuminating Oil Co.'s No. 1 Wickline, C SW NW Section 26-11-3w, was completed for 2,562 bbls. of oil in five and one-half hours from 6,543-6,634 feet.

Pawnee County

P. Adamson's No. 2 McFall, CNL NE SE Section 4-20-8, made 8 bbls. from 1,550-80 feet.

Pittsburg County

Tape Oil Co.'s No. 1 Fulton, SE cor. Section 34-7-14, old well drilling deeper, was drilling at 2,650 feet.

Pottawatomie County

Magnolia Petroleum Co.'s No. 1 School Land, NW cor. NE Section 36-6-4, is a rig on the ground. Sinclair Prairie Oil Co.'s No. 1 Meyers, NW cor. SW SE Section 32-7-4, made 40 bbls. of oil in eight hours from the pay at 3,954-55 feet. Root and others' No. 1 Melton, NE cor. SW NE Section 13-6-3, is a location. Phillips Petroleum Co.'s No. 1 Paris, NE cor. SE Section 35-7-4, is a location.

Pontotoc County

Harris and Hayes and others' No. 1 Brown, NE cor. SW NE Section 28-5-6, is a location. Barnsdall Oil Co.'s No. 2 Hart, SW cor. NW NW Section 27-5-6, made 12 bbls. of oil from 1,535-49 feet, total depth 1,732 feet. Fleetborn and others' No. 1 Norris, NE cor. Section 28-5-6, made 363 bbls. of oil from 2,440-42 feet.

Seminole County

The Texas Company's No. 3 Eliza, SW cor. NW SE Section 19-7-8, made 99 bbls. of oil in 12 hours from 3,064-3,108 feet.

Stephens County

Gilbert and others' No. 3 Green, SE cor. NE Section 2-2s-8w, is a rig. F. Chamberlain's No. 1 Parker, NE cor. SE SE Section 2-2s-8w, old well drilling deeper, was drilling at 1,770 feet. McAllister's No. 1 Dare, SW cor. NW Section 1-2s-8w, made 50 bbls. from 1,462-72 feet. G. Pace's No. 11 Houston, SE cor. SW Section 2-2s-8w, made 15 bbls. from 1,500-12 feet. Pace and others' No. 1 Tellerson, SE cor. SW NW Section 14-1-9w, is a rig on the ground. Perry

(Continued on Page 120)

Wildcat Operations in Oklahoma

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location— Remarks:

Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w ..... S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w.. S.D. 5,502 ft.

ATOKA COUNTY

Willis et al's No. 1 Roland, NW NE SE Sec. 6-1-15 ..... Drlg. 800 ft.
Hicks et al's No. 1 Norris, NE NW SE Sec. 15-1-15 ..... Machine.
Newman et al's No. 1 Bassett C NW Sec. 18-1-15 ..... Drlg. 110 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w ..... Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w.. T.D. 2,244 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w ..... S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w ..... S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w ..... C.O. 280 ft.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w ..... S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w ..... S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21 .... S.D. 1,504 ft.

COAL COUNTY

Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 ..... Drlg. 2,395 ft.
Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8 ..... S.D. 1,450 ft.

COMANCHE COUNTY

T. E. Bradley et al's No. 1 Pruitt, NE SW SE Sec. 8-1-9w S.D. 1,701 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w..... S.D. 1,450 ft.

CREEK COUNTY

E. L. Jillson et al's No. 1 Starr, SE NW, Sec. 18-15-8 .... Drlg. 905 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w ..... Location.

ELLIS COUNTY

L. C. Hierek's No. 1 Roper, C SE NW Sec. 21-20-24w .... Rig on ground.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 32-3-7w ..... Drlg. 2,680-85 ft.; show oil.
Schoonmaker et al's No. 1 Station, NW cor., Sec. 35-4-7w.. Drlg. 2,475 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w. S.D. 5,850 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w..... 5,000,000 ft. gas 1,455-61 ft., T.D 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w..... S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ..... S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9 ..... S.D. 200 ft.

HUGHES COUNTY

Hudspeth et al's No. 1 Harron, NW NE Sec. 3-8-8 ..... Location.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1.. 10,000,000 ft. gas 2,556-63 ft.; mudding off gas.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ..... Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ..... S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w ..... Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-19w..... S.D. 1,225 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19 ..... S.D. 1,542 ft.

LINCOLN COUNTY

Hilton Phillips' No. 1 Phillips, SW NW Sec. 2-14-3 ..... Show oil and water; 6-in csg.; swabbing; T.D. 5,040 ft; P.B. to 4,055-78 ft.; abnd.
Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5 ... Drlg. 3,900 ft.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w..... Drlg. 2,225 ft.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... S.D. 5,515 ft.

OSAGE COUNTY

Mohawk Oil Co.'s No. 1, NE cor. Sec. 10-26-9 ..... Drlg. 1,320 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft

PITTSBURG COUNTY

Tate Oil Co.'s No. 1 Fulton, SE cor. Sec. 34-7-14 ..... Drlg. 2,650 ft.
Nelson & Flynn's No. 1 Anderson, NE SW, Sec. 12-7-13... Rig.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17 ..... Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14 ..... Rig.
Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 ..... Drlg. 950 ft.

PONTOTOC COUNTY

Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 ..... S.D. 495 ft.
Vanderslice's No. 1 Meredith, NE SW, Sec. 17-2-4 ..... Show oil 295-368 ft.; 6 bbls. est.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8 ..... Drlg. 600 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4 ..... Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w..... S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w..... S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 ..... Drlg. 210 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w ..... Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft.; S.D. 2,467 ft
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 1,770 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E .. T.D. 4,720 ft.: to cement.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2S-12 ..... S.D. 505-09 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ..... S.D. 1,967 ft.

BRYAN COUNTY

Hughes' No. 1 Ayres, NE SW Sec. 30-7S-7 ..... S.D. 325 ft.

CARTER COUNTY

Russell's No. 1 Ratliff, NW NE NW SW Sec. 19-1s-2w ... Drlg. 1,520 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w ..... Location.

MARSHALL COUNTY

J. T. Hogan's No. 1 Thompson, NE NW NE, Sec. 26-7s-6.. Location.
Trailkill et al's No. 1 Spence, NE NW Sec. 10-7s-6 T.D. 917 ft.; S.D.

McCURTAIN COUNTY

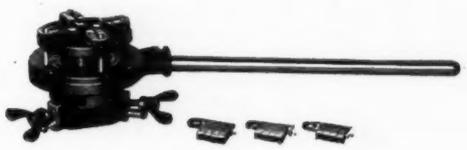
Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8s-27 .... Show oil 560 ft.; 630 ft S.D.
Stampfa' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25.. Drlg. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 ..... S.D. 1,950 ft

STEPHENS COUNTY

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w.. Rig.
George's No. 1 Ryan, NW SW NE Sec. 31-3-15 ..... S.D. 510 ft.



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Initial Production of Well, Ritz-Canton Section, Largest in Kansas Fields in Several Years

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Kansas production for the week ending July 23, was approximately 96,300 bbls. a day, which is a decline of nearly 1,000 bbls. from last week's figures.

An interesting situation has developed, which is to be discussed at the next hearing of the Kansas Public Service Commission, to be held July 27. Vickers Petroleum Co. has objected to the commission's ruling concerning allowables for the Stoltenberg area, Ellsworth County. The complaint alleges that the company's wells in the shut-in area of that pool, are being damaged by inroads of water because they cannot produce and market their own oil. They are asking for an order allowing them to market their own oil without making nominations to purchase from other wells in the pool. It is the first request of this kind the commission has received.

A 14,000-Bbl. Well

The largest new well in the State in years was reported during the week with a potential of 14,326 bbls. a day. The well is Dickey Oil Co.'s No. 4 Decker, NW cor. SE, Section 35-19-2w, in the Ritz-Canton Field in McPherson County. When the well was first completed it flowed 310 bbls. of oil in 47 minutes. This flow was made through the gas overflow gate, wide open. It was then shut in until additional tanks were erected. The next production the well made 7,163 bbls. of oil in 12 hours and was given a potential of 14,326 bbls. in 24 hours. The oil was found in the chat at 2,916-48 feet.

The Dickey Oil Co.'s lease, the southeast quarter of Section 35-19-2w, now has a potential of 25,700 bbls. a day from four producing wells. Previously to the completion of No. 4 Decker, the lease had a potential of 11,375 bbls. a day from three wells. The other wells on this lease show a potential production as follows: No. 1 Decker, 3,675 bbls. a day; No. 2 Decker, 3,194 bbls. a day, and No. 3 Decker, 4,506 bbls. a day. All the wells are producing from the chat formation.

The top of the chat in No. 4 Decker was found about 12 feet higher than in the northwest diagonal offset well.

The oil production from the lease will be shipped to the Dickey Oil Co.'s refinery, which is under construction at McPherson, located about 6 miles to the north and west.

Three new locations were staked in the Blake district of Reno County by the Olson Drilling Co. and others. They plan to continue the development of the area. The three locations are No. 1 Sabin, C SE SW, Section 13-23-4w; No. 1 Nelson, C NW NW, Section 30-23-4w, and No. 1 J. Fast, C NW NE, Section 25-23-4w.

The same operators are shut down on top of the pay, waiting for cement at 3,227 feet at No. 1 Rudicel, C SW SE, Section 24-23-4w, and it will be several days before the well will be drilled into the pay horizon. Same operators' No. 1 Day, C SW NW, Section 19-23-3w, on the western edge of Harvey County, was drilling at 3,850 feet.

Developing South Voshell

The development of the south extension to the Voshell Pool in McPherson County continues at a rapid pace. This development started with the completion of the Western Gasoline Co.'s No. 1 Wall, which started at 1,000 bbls. per day.

The north offset, being drilled by Derby Oil Co., is No. 1 Neufeldt, in Section 21-21-3w, McPherson County. McBride, Inc.'s No. 1 Neufeldt, NE cor. NW, Section 28-21-3w, was spudding. It is the west offset to the Mid-Kansas Oil & Gas Co.'s No. 1 Sperling, which was recently completed for 365 bbls. a day.

North of the Derby Oil Co.'s No. 1 Neufeldt, L. A. Mylius and others' No. 1 in the SE cor. SW, Section 16-21-3w, was being rigged up preparatory to spudding. This test is only a short distance from some of the Simpson sand wells in the Voshell Pool.

An Important Wildcat

Stafford County is to have a wildcat test, S. Springer and others' No. 1, NW cor. NE, Section 2-25-11w, for which material is being moved. It is located about 1½ miles west of the Reno County line. Considerable interest is being shown in this location as no test has ever been drilled in that part of the county. Fifteen oil companies hold acreage in the vicinity of the test.

Seismographic and core drill surveys were made of the area before the test was located.

The operators plan to drill the test to the Silicious lime which is expected to be found at approximately 4,000 feet. Other producing wells in Stafford County which were found north of the townsite of Stafford, located about 15 miles to the northwest of this test, found production in the Silicious lime as do nearly all other producers west of Hutchinson in Reno County.

Another Due in Hollow Pool

Another well is expected to be completed in the Hollow area in northwestern Harvey County in a few days. The test is J. E. Mabee, Inc., and Shell Petroleum Corp.'s No. 1 Martens, NE cor. SE, Section 19-22-3w. It was drilling near 3,100 feet with rotary tools and it is expected to reach the pay horizon around 3,480 feet. This is the second test in the area to be drilled with rotary tools, the other having been Stanolind Oil & Gas Co.'s well. The potential production of the Hollow Pool is estimated at 11,400 bbls. a day. Potential production of the wells is as follows:

Company—	Bbls.
Hollow	1,450
McBride	3,500
Stanolind	1,650
Mid-Kansas	4,800
Total	11,400

The wildcat test of Skelly Oil Co. in Kingman County is expected to reach the Silicious lime in a few days. The well is No. 1 Liesman, SE cor. SW, Section 20-27-10w. It was drilling at 4,079 feet in shale a few days ago. The Wilcox sand was found in this test at 4,019-55 feet, and at 4,038 feet a show of oil was found. Deeper drilling has been delayed on account of the large gas flow from the Viola formation breaking in. The Viola lime was found at 3,922-58 feet, where it made 26,000,000 feet of gas a day. The 5-inch casing was landed at 3,978 feet but not set, and the gas broke through delaying the drilling operations.

Leasing is active in the area surrounding the 21,000-acre block of the Skelly Oil Co. in Kingman County. The increased activity indicates an interest in the territory northeast of the wells in Kingman County through to Reno County. Some new leases have been taken in both counties.

Magnolia Petroleum Co.'s No. 1 Stucky, SE cor. NE NE, Section 28-20-3w, about three-quarters of a mile north of the Voshell Pool, in McPherson County, has reached the top of the Silicious lime at 3,393 feet. The 6-inch casing was being landed at this depth. If this test makes a producer it will extend production three-quarters of a mile in the area. Three offset locations will be forced.

Lack of Pipe Lines

A survey of eight producing counties in the central western part of the State, that are new in the producing column, shows that production is increasing faster than pipe line facilities to transport it. The potential production of these eight counties, Barton, Ellsworth, Rice, Rush, Stafford, McPherson, Harvey and Reno, is estimated at 207,966 bbls. daily according to the figures of the state umpire. These potentials are based on a few hours open flow and then multiplied to give an estimated 24-hour gauge.

There are 307 oil wells in these eight counties. They are allowed to produce only 23,058 bbls. per day which is 11 per cent of the potential production. These figures do not include wells in Rice County, not under proration.

In McPherson County there are 254 wells in the Ritz-Canton-Decker, Voshell and Johnson Pools, now under proration.

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Smith et al's No. 1 Wilson, C NW SW Sec. 13-18-14w	Rig on ground.
Midwest Ref. Co.'s No. 7 Scheufler, C SW SE Sec. 9-20-11w	Drlg. 3,305-34 ft.; swabbed 265 bbls., 9½ hours.
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; C.O. 3,604 ft.
BUTLER COUNTY	
Cameron-Great Basin Oil Co.'s No. 1 Lardson, C SE NW Sec. 13-28-2	Drlg. 700 ft.
Ramsey's No. 1 Michael SW NW NW Sec. 18-27-3	Drlg. 1,985 ft.
CHASE COUNTY	
Ryan et al's No. 1 Lipp, C SE Sec. 35-18-6	S.D. 625 ft.
DICKINSON COUNTY	
Severe et al's No. 1 Lavengood, NE SW, Sec. 13-13-2	Abnd. 4,752 ft.
DOUGLASS COUNTY	
Pure Oil Co.'s No. 1 Limb, NW SE, Sec. 31-14-19	Rig on ground.
EDWARDS COUNTY	
Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE, Sec. 30-24-18w	Drlg. 4,115 ft.
ELLSWORTH COUNTY	
Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW, Sec. 7-14-7w	Location.
Morgan's No. 1 Andrews, NE SW Sec. 3-17-8w	Spudded; S. D.
Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w	Drlg. 435 ft.
Slick et al's No. 1 Dreford, SW NW Sec. 7-17-10w	Drlg. 3,140-50 ft.; show oil.
R. Gear et al No. 1 Kroboth, SE NW Sec. 12-15-10w	S.D. 50 ft.
Johnson Vickers' No. 1 Claussen, C SE NW Sec. 31-15-10w	S.D. 3,364-74 ft.; water; abnd.
R. Gear et al's No. 1 Sanberth, C SW SE, Sec. 29-16-9w	S.D. 50 ft.
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	Rig.
HASKELL COUNTY	
Victor Martin et al's No. 1 Martin, C NW Sec. 8-28-31w	Rig.
FINNEY COUNTY	
National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-30w	U.R. 5,140 ft.
FORD COUNTY	
Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w	Drlg. 5,203 ft.
HARVEY COUNTY	
D. R. Louck's No. 1 Regier, SW SE NW, Sec. 9-22-3w	Drlg. 3,423 ft.
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1	Drlg. 3,039 ft.
KINGMAN COUNTY	
Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w	12-in. csg. 1,610 ft.; S.D.
McPHERSON COUNTY	
Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	S.D. 1,525 ft.
Detrick's No. 1 Dalke, NW SE Sec. 16-19-1	S. D. 50 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1n.	S.D. 580 ft.
Simmons-Canary's No. 1 Krehbiel, SE NW Sec. 33-18-1w.	S.D. 2,907 ft.
MORTON COUNTY	
Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 22, 34-43w	T.D. 3,640 ft.; temp. abd.
MORRIS COUNTY	
Urschel et al's No. 1 Bersuch, NW SE NW, Sec. 10-17-7	S.D. 915 ft.
NORTON COUNTY	
Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.
OSAGE COUNTY	
Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15	S.O. 2,190-2,200 ft.; temp. abnd.
PHILLIPS COUNTY	
Hall et al's No. 1 Donaldson, C NE NE, Sec. 25-5-18w	T.D. 3,440 ft.; P.B. to 3,210 ft.; shot 15 qts.; no results; abnd.
PRATT COUNTY	
Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE, Sec. 28-27-11w	Drlg. 865 ft.
RENO COUNTY	
National Union's No. 1 Hill, NE SE Sec. 18-24-4w	Location.
Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w	S.D. 318 ft.
RICE COUNTY	
Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w	Rig.
R. Ramsey's No. 1 Hutton, SW NE SW Sec. 6-20-9w	Drlg. 3,325 ft.
Slick et al's No. 1 Arth, SE NE Sec. 27-18-10w	Drlg. 3,241-43 ft.; show oil.
J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w.	S.D. 50 ft.
RUSSELL COUNTY	
J. Brennan's No. 1 Waly, CNL E½ NW, Sec. 29-13-11w.	Rig.
RUSH COUNTY	
Barnsdall's No. 1 Schultz, SW cor. Sec. 3-19-16w	Rig.
Skelton et al's No. 1 Brock-Hartman, SW SE NE, Sec. 4-18-16w	S.D. 50 ft.
SALINE COUNTY	
Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w	S.D. 3,401 ft.
SEDGWICK COUNTY	
Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1	S.D. 180 ft.
SHERIDAN COUNTY	
Flo et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w	H.F.W. 4,535-45 ft.; S.D.
STEVENS COUNTY	
Argus Prod.'s No. 2 Christopher, C NE, Sec. 10-33-39w	S.D. 5,521 ft.
SUMNER COUNTY	
Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w	Rig on ground.
Frees Oil Co.'s No. 1 Tompkins, SW, Sec. 26-33-1	Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6-34-2	S.D. 3,639 ft.

which are credited with a total potential of 145,288 bbls. daily. These wells are allowed to produce 16,760 bbls. daily.

Ellsworth County has 17 producing wells with a potential of 24,127 bbls. daily, and an allowable of 2,400 bbls. daily.

Rice County wells which are under proration total 17, with a potential of 16,328 bbls. daily and an allowable of 2,138 bbls. daily.

In Harvey County, four wells in the Hollow Pool, recently completed, have a potential of 11,400 bbls. daily, but are allowed to produce only 1,200 bbls. daily.

Reno County, which many believe has a promising future, has 10 producing wells with a potential of 5,600 bbls. daily, with an allowable of 500 bbls. daily.

Stafford County has four producing wells which are shut in lacking a pipe line outlet. These four wells have a potential of 4,100 bbls. a day.

Barton County has three producing wells with a potential production of approximately 1,800 bbls. a day, and an output of 60 bbls. a day.

Rush County has only one producing oil well, with a potential of 50 bbls. a day. It is shut in awaiting a pipe line outlet. This county has several gas wells.

Barton County

Midwest Refining Co.'s No. 29 Scheufler, C SW SE Section 9-20-11w, swabbed 27 bbls. an hour from the pay at 3,304-34 feet.

Cowley County

Deal Oil & Gas Co.'s No. 1 Holt, SE cor. NE SW Section 22-32-4, is a location. Stover and others' No. 1 Unknown, NE cor. SW SW NE Section 27-32-4, is a rig on the ground. Same operators' No. 1 Unknown, SE cor. SW SW NE Section 27-32-4, is a location. Slocum and others' No. 1 Pudden, SW NE Section 16-35-4, was abandoned at 1,920 feet. Wakefield and others' No. 1 Abernathy, SE cor. NE SE Section 22-32-4, made 720 bbls. from the pay at 3,267-82 feet.

Greenwood County

Davidson and others' No. 1 O'Neil, NW cor. NE Section 20-23-11, was abandoned at 2,102 feet.

Harvey County

Mid-Kansas Oil & Gas Co.'s No. 1 Duerkson, SE cor. NE Section 19-22-3w, is estimated at 3,000 bbls. a day from 3,475-88 feet. Hollow and others' No. 1 fee, old well drilled deeper, SW cor. NW Section 20-22-3w, made 1,450 bbls. from 3,509-17 feet.

Marion County

Deiter and Youker's No. 1 Helback, CSL NE Section 10-17-4, was abandoned at 2,392 feet.

Rice County

Roy Ramsey's No. 1 Hilton, SW cor. NE SW Section 6-20-3w, was abandoned at 3,323 feet.

McPherson County

Westeron Gasoline Co. and others' No. 1 Neufeldt, SE cor. SW NE Section 21-21-3w, is a rig. Mabee and others' No. 1 Nickel, NE cor. SW Section 33-21-3w, is a location. Shell Petroleum Corp.'s No. 4 Johnson, NE cor. NW Section 2-20-3w, is a rig. Western Gasoline Co. and others' No. 1 Wall, old well drilling deeper, NW cor. SW SE Section 21-21-3w, made 125 bbls. of oil in two and one-half hours from 3,137 feet. Mid-Kansas Oil & Gas Co.'s No. 1 Helstrom, NW cor. SE Section 35-19-3w, made 622 bbls. from 2,984-3,049 feet. Prunty Drilling Co. and others' No. 1 Chasey, SE cor. NW NW Section 35-19-3w, made 480 bbls. from 2,990-3,050 feet. Youker and Shell Petroleum Corp.'s No. 3 Gratton, SW cor. Section 24-19-3w, was abandoned location. Wolfe Creek Oil Co.'s No. 1 Krehbiel, old well drilling deper, NE cor. NW NW Section 29-19-2w, made 220 bbls. from 2,917-67 feet. Vernon Oil & Gas Co.'s No. 1 Thomas, NE cor. SW Section 26-19-2w, made 90 bbls. from 2,898-2,964 feet. Dickey Oil Co.'s No. 4 Decker, NW cor. SE Section 35-19-2w, made 14,326 bbls. from the pay at 2,916-48 feet. Skelly Oil Co.'s No. 1 Wilson, SE cor. NW Section 35-19-2w, made 2,702 bbls. from 2,935-67 feet.

Reno County

Sinclair Prairie Oil Co.'s No. 1 Regier, C NE SE Section 24-23-4w, is a location. Olsen and others' No. 1 Sabin, C SE NE Section 24-23-4w, made 290 bbls. from 3,264-3,372 feet.

Sedgwick County

Davidson and Miller's No. 1 Houston, NW cor. SE SW NW Section 19-27-2, made 10 bbls. from the chat at 2,997-3,004 feet. Continental Oil Co. and Gypsy Oil Co.'s No. 1 Bishop, NW cor. NE Section 13-26-1w, made 20 bbls. of oil from 3,021-60 feet. Stearns & Streeter's No. 1 Mead, SE cor. NE SE SE Section 16-25-1, was abandoned at 3,427-52 feet.

WINS GOLF TROPHY

J. C. RUSSELL

J. C. Russell, drilling superintendent for Champlin & Bass, won the annual Mid-Continent Oil Field Golf Tournament held at the Twin Hills Golf Club, Oklahoma City. All members of the production branch of the oil industry had been invited to participate in the tournament which was sponsored by the Chicago Pneumatic Tool Co.

International Petroleum Co. South American Production

CHATHAM, Ontario, July 23.—A report recently issued covering operations of the International Petroleum Co. of Toronto in its South American fields for May and June shows, for May, no new completions in the Peruvian fields. The total Peruvian production for May was 757,404 bbls., while the average daily production in June was 26,168 bbls. For the five-month period ending May 31, three producing wells were completed in Peru with average initial production of 49 bbls., while total crude production for that period was 3,147,078 bbls.

In the Colombian Field, there was one new completion in May with initial production of 554 bbls., while total crude production for the month amounted to 1,682,353 bbls. The average daily production in June was 54,250 bbls. In the five-month period there were three new completions with average initial production of 656 bbls., while total crude production for that period was 7,942,920 bbls.

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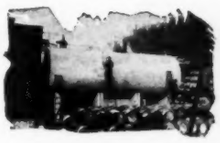

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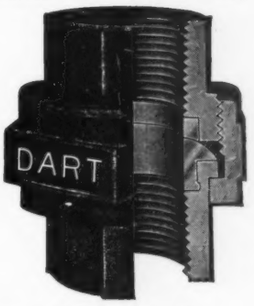

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Revival of Interest in New Mexico State Leases Followed by Best Sales in Many Months

By TOLBERT R. INGRAM
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DENVER, Colo., July 25.—The appearance of representatives of major companies at the monthly auction sale of New Mexico state land leases points to a revival of interest and was followed by the best sales in months. New Mexico oil men are protesting against a proposed tax on nonproductive oil lands. Hobbs potential was increased July 16 by 3,224 bbls. to 1,005,658 bbls. daily and daily outlet remains unchanged. The Midwest Refining Co. completed two wells at Hobbs for 2,009 and 481 bbls. daily. Flynn, Welch & Yates' No. 62 State came in as a producer and marked an extension of the Artesia Pool.

In Colorado, Manning & Terry's No. 1 Niles, testing the east side at Greasewood, is running 80 feet low on the Timpas lime. The Texas Company is abandoning its No. 7 Quaintance-Hocking in Tow Creek. Caving ground and water shortage is delaying several important Colorado tests.

In Wyoming one new operation is starting on the Garland Dome with the Madison as the objective and one small well was completed in Osage. Continental Oil Co. completed a 5,000,000-foot gas well at Lance Creek.

In Montana R. C. Tarrant's test in the Cut Bank area swabbed 83 bbls. of oil.

NEW MEXICO

At the monthly auction of oil and gas leases on state land held by Commissioner James F. Hinkle at Santa Fe on July 11, leases were sold on 17 out of 38 tracts offered for $7,900. Commissioner Hinkle said this was the best sale held for a year and a half and that a significant feature of the sale was that the bigger companies were among the bidders. These included The Texas Company, Phillips Petroleum Co., Amerada Petroleum Corp., Gypsy Oil Co., Carter Oil Co. and Snowden & McSweeney. Most of these companies have not shown any interest in the sales in recent months. The leases sold are principally in Lea and Eddy Counties. Abstractors working at the state land office also report their business has shown a steady increase in recent weeks. Extensive geophysical work has been undertaken by a number of companies throughout southeastern New Mexico during the lull in drilling operations the past year.

The New Mexico Tax Commission was to conduct a hearing at Lovington on July 23 on its proposed plan for taxing nonproductive oil land. The executive committee and advisory board of the New Mexico Oil Men's Protective Association held a special meeting at Artesia at which a special committee was appointed to appear before the commission and make a protest against the imposition of the proposed tax. The oil men's association unanimously adopted a resolution at a meeting on March 12 condemning the proposed plan of taxing nonproductive oil land.

Lea County

Hobbs potential production as of July 16 was placed at 1,005,658 bbls. daily for the last half of July, an increase of 3,224 bbls., due to recent completions. Allowable outlet for the period is 29,500 bbls. daily.

Midwest Refining Co.'s No. 11 Byers, C NE NE Section 4-19-38, just inside the southeastern edge of the Hobbs Pool, was given a potential of 2,009 bbls. of oil and 1,600,000 feet of gas daily on the official gauging through the tubing for proration purposes. It failed to flow when tested open. It will be allowed to produce 95 bbls. daily. Total depth is 4,145 feet and 3-inch tubing was run to 4,145 feet.

Midwest's No. 25 State, C SE NE Section 9-19-38, was given an official rating of 481 bbls. of oil and 300,000 feet of gas daily. Its total depth is 4,190 feet and 2½-inch tubing is at 4,170 feet. Midwest's No. 29 Turner, C SE NW Section 34-18-38, an outside well, is drilling at 3,805 feet in anhydrite. It cut a gas sand at 3,730-40 feet. Same company's No. 11 Terry, C NE SE Section 9-19-38, is drilling at 1,352 feet in red rock and shells. The 16-inch was cemented at 196 feet with 100 sacks. Skelly Oil Co.'s No. 1 Turner, SE NW Section 34-18-38, is rigging up rotary.

In the northern part of the pool, Shell Petroleum Corp.'s No. 1 Lizzie Rice, SE cor. Section 13-18-37, is rigging up rotary, and Empire Gas & Fuel Co.'s No. 4 Boon Hardin, NW cor. Section 19-18-38, is drilling at 170 feet in red rock. Gypsy Oil Co.'s No. 2 Graham, NE cor. Section 24-18-37, is drilling at 2,520 feet in salt. It topped anhydrite at 1,486 feet and salt at 1,610 feet.

In the Lea Area The Texas Company's No. 3-A State, C Lot 2, Section 2-21-33, is shut down at 1,415 feet waiting on pump parts.

In the Eunice area Tidal Oil Co.'s No. 1 State, C SW NE Section 8-21-36, is drilling at 700 feet in black shale and red rock. The 15½-inch was cemented at 308 feet with 200 sacks.

Eddy County

Flynn, Welch & Yates' No. 62 State, NW cor. SE Section 10-19-28, which marks a short extension of the productive area of the Artesia Pool to the southeast, was completed at 2,153 feet and tested 4 to 5 bbls. per hour and 100,000 feet of gas. The pay horizons were sandy lime at 2,068-78 and 2,092-2,116 feet. It opens a small area of drilling territory between this location and the field proper.

Leonard & Levers' No. 7 State-Levers, C SW SE Section 20-17-29, Jackson area, is drilling at 2,175 feet in gray lime. It had 100,000 feet of gas at 2,170 feet.

W. A. Scott's No. 1 Kaiser, NW SE Section 7-18-27, southwest of the Artesia Pool, is bottomed at 925 feet in lime and trying to shut off water with a packer.

J. O. Hammond & Son have moved a rig over a well drilled for artesian water in the SW cor. Section 26-18-26, southeast of Dayton, and resumed drilling. After making a few feet of hole to 1,162 feet, it was tied up with a fishing job.

New Mexico Oil Syndicate's No. 1 McClelland, SW NW NE Section 22-22-23, a location since last December, 25 miles west of Carlsbad, has purchased from Roy Stovall a rig used in drilling Culberson and others' No. 1 State and is moving same to location.

Bernalillo County

Norins Realty Co.'s No. 1 Pajarito grant, NW cor. NE Section 22-9n-1e, is drilling at 2,200 feet in river wash.

Chaves County

R. D. Compton's No. 1 Emerson, SW cor. SE Section 20-10-24, near Rosewell, is drilling at 212 feet in lime.

Warman Oil Trust's No. 1 Evans, N half Section 15-14-25, Blackdom district, is shut down at 1,433 feet with a hole full of water and probably will plug.

De Baca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE Section 16-1s-27, Buffalo Creek, is drilling at 5,000 feet in black lime and carry the 6⅝-inch.

Guadalupe County

New Mexico Producing & Refining Co., Ltd.'s No. 1 McMullen, SW cor. Section 24-5n-16, Mesa Leon district, is shut down for orders at 4,717 feet.

Rio Arriba County

J. A. Bennett, reported two weeks ago to be moving in equipment under a contract with Pan State Oil Co., Ltd., for a deep test on the El Vardo structure, was killed the past week when he was pushed over a 25-foot embankment into El Vardo Lake while trying to bridle a horse.

COLORADO

Washington County

C. M. Smith and others' No. 1 Middlemist, SE SW SE Section 14-4s-56, Middlemist Dome, is delayed again at around 1,600 feet with caving conditions and has decided to run another string of pipe before attempting to go deeper. The 12½-inch is at 1,475 feet.

Weld-Morgan Counties

Manning & Terry's No. 1 Niles, C SE NE Section 13-6n-61, joint with Continental Oil Co. and Platte Valley Petroleum Co., has cored through the Timpas limestone, the first definite marker in the field, and is drilling at 6,329 feet. This location is half a mile east of Continental's No. 1 Briggs, the nearest and best producer in the Greasewood Pool and the first test in that direction expected to show whether there is a structure. The correlation of logs indicates the Niles well is running about 80 feet lower than No. 1 Briggs. While this is considered unfavorable so far as structural conditions go, the opinion generally is held that it has comparatively little bearing on the possibilities for production in the objective Muddy sand. This is based on the theory that there is no pronounced structure at Greasewood and that the oil in the Muddy is trapped in a lenticular sand that makes one location about as good as another, depending upon the thickness of the sand at the particular place drilled and whether the sand is sealed off from the water. It is expected the 7-inch will be run on top of the objective within a few days and that the well will be drilled in the latter part of next week.

Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, northeast of No. 1 Niles, after cementing back from 3,877 to 3,470 feet to straighten, is drilling at 5,705 feet and expects to begin coring at once to pick up the Timpas marker.

Tulsa-Fort Morgan Petroleum Co.'s No. 1 Anthes, C NE NE Section 24-8n-59, New Raymer district, continues to have trouble with caving ground at around 2,300 feet and after several cementing jobs failed to stop that condition, and it has been decided to run 10-inch. The casing is being trucked to location. The 12½-inch is cemented at 2,011 feet. Rotary tools probably will be used after the test drills the Hygiene.

Ramsey Brothers and Danciger Oil & Refining Co.'s proposed test to the south of No. 1 Anthese has not yet been spotted awaiting the outcome of efforts to provide a water supply for rotary operations. Tests of the supply in nearby creek beds did not yield satisfactory results and a contract was made with Ohio Oil Co. to use its coring outfit to put down two wells in the SE Section 15-7n-59 to the water formation found at around 1,000 feet. These wells are near the location at which it is expected the deep test will be drilled.

Routt County

The Texas Production Co.'s No. 7 Quaintance-Hocking, NE SE Section 18-6n-86, Tow Creek, was cleaned to bottom at 3,640 feet and failed to show anything worth while. Casing is being pulled to abandon. Same company's No. 4 Carstarphen-Irwin, NE NW NW Section 5-6n-86, is drilling and swabbing at 3,585 feet. This is an old well being deepened from 3,485 feet.

Rio Blanco County

California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is held up fishing for drill pipe at 5,664 feet. It is believed to be less than 300 feet from the top of the Pennsylvanian formation.

Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance Creek, is drilling at 275 feet after landing 16-inch on bottom. The pipe was not cemented.

WYOMING

Natrona County

Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, is drilling at 1,436 feet after cementing 8¼-inch at 1,387 feet to shut off water.

Lakota Oil & Gas Co.'s No. 5, NW NE Section 1-36-82, North Casper Creek, has rig completed and is waiting until crew is released from No. 6. Its No. 6, Section 36-36-82, cemented 8¼-inch on top of the gas sand at around 1,000 feet and is preparing to drill in. The company is developing a supply of gas with the object of piping it to Casper in the event that city undertakes to purchase the distributing system of the New York Oil Co. Questions involving the proposed acquisition are to be presented to the courts for a legal interpretation before further action is taken, and as this is expected to require some time, the city council has authorized the return of $10,000 which the Lakota company deposited as a guarantee.

Big Horn County

Allen Oil Co. is digging cellar for its No. 1 Montana-Wyoming, Lot 52, Section 33-56-97, Garland Dome. This is to be drilled to the Madison lime and the location is near the discovery well in that formation drilled by the Ohio Oil Co. The lease is owned by Montana-Wyoming Oil Co.

Park County

Henderson Producing Co.'s No. 10, SW NE NE Section 31-58-99, South Elk Basin, is drilling at 225 feet after straightening a crooked hole.

Weston County

One completion in the Osage Field was reported in Carl Cundy's No. 3, NE NW NE Section 31-46-63, which is cleaning out and swabbing 18 bbls. per day. It is estimated at 30 bbls. on the pump.

Chadron-Osage Oil Co.'s No. 17, SW NW SW Section 14-46-64, is bottomed at 2,000 feet and waiting for casing test. It will drill in this week. Federal Oil Co.'s No. 3, SE NE SE Section 15-46-64, cemented the 8¼-inch at 1,180 feet and is waiting. Central West Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is drilling at 300 feet, and Riggs Oil Co.'s No. 2,

SE NE Section 16-46-64, is drilling at 1,800 feet. General Oil Co.'s No. 1, SE SW SW Section 15-46-64, is drilling at 1,300 feet, and Wyoming-Dakota Oil Co.'s No. 1, SE SW NE Section 15-46-64, is drilling at 300 feet. Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, is a location, and Homestead Oil Co.'s No. 3, CSL SE NE Section 15-46-64, is rigging up.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is drilling up bailer dropped at 4,415 feet, and Gose Oil Syndicate's No. 1, NE cor. Section 28-47-63, Soda Creek, is bottomed at 5,050 feet and reconditioning hole.

Niobrara County

Continental Oil Co.'s No. 4 Rohlf, NW SW SW Section 32-36-65, Lance Creek, was recompleted at 3,276 feet for 5,000,000 feet of gas per day after deepening from 2,960 feet. The 4¾-inch liner was cemented at 3,235 feet.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is drilling at 1,355 feet. Premier Oil Co.'s No. 1, SE Section 7-28-92, Kirk Dome, Crook's Gap district, a Los Angeles syndicate, is shut down at 2,800 feet on account of litigation. It was reported to have had a good show of gas in the Shannon sand, which will be tested in the event the Frontier is unproductive. Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, is shut down at 3,170 feet while new boiler is being set up.

Carbon County

Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE Section 11-20-81, Elk Mountain, is ready to drill in after cementing 6¼-inch at 4,340 feet and standardizing. It had a show of gas in the Muddy at 4,196-4,208 feet and a show of oil in the Dakota at 4,340-65 feet in cores taken.

Sublet County

California Petroleum Corp.'s No. 7-H-2, Lot 10, Section 3-26-113, La Barge, is fishing at 555 feet.

Sweetwater County

Wyoming-California Petroleum Corp.'s No. 1, SE SE Section 23-17-104, Baxter Basin, is drilling at 3,714 feet in a sharp sand which showed nothing of value. This sand logs below the first gas sand.

Converse County

Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, is bottomed at 4,328 feet and standardizing to drill into the Lakota.

SOUTH DAKOTA

Wy-Tex Oil & Gas Co.'s No. 1 Hamilton, Section 32-8n-1e, Oak Creek, lost its hole at 1,080 feet, skidded rig and is spudding in No. 2, same lease. This operation is in Butte County. Chadron-Osage Oil Co.'s No. 1 Moody Ranch, NE cor. SW Section 6-12s-6e, Fall River County, is drilling below 2,700 feet.

UTAH

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is drilling in shale at 5,625 feet. No salt has been encountered below 5,350 feet.

MONTANA

Toole County

The Texas Company's No. 1 International Land Co., C S half SW Section 6-36-4w, northeast of the Cut Bank gas wells, proved to be dry in the objective horizon, the Sunburst sand, and will be abandoned. It stopped below 2,675 feet.

Glacier County

R. C. Tarrant's No. 1 Haglund, NW cor. SW Section 13-34-6w, to the southwest of the Cut Bank gas wells, swabbed 115 bbls. in five hours from sand at 2,848-94 feet and is being tubed for a pumping test. Tarrant's No. 1 Yunk, NW cor. Section 12-34-6w, 1½ miles north of the Haglund well, is building rig.

The Texas Company's No. 1 Peterson, SW NE SE Section 28-36n-12w, Milk River district, is making hole with rotary and coring below 3,200 feet, presumably in the lower Colorado shale.

Liberty County

Whitlash Petroleum Co.'s No. 1 Hicks, NW NE Section 26-37-4e, Whitlash district, swabbed 83 bbls. from sand at 1,792-1,848 feet and is installing rods and tubing. It is an offset to Western Natural Gas Co.'s No. 1 Hicks, the discovery, which settled to 1 bbl. per hour after pumping off the head. R. C. White's No. 1 Hicks, C NE NE Section 26-37-4e, one-third of a mile to the east, had a little saturation in the first sand at below 1,600 feet and is drilling on to the second sand. A. E. Crumley's No. 1 Strode, C NW NE Section 35-37-4e, to the south of the discovery, is drilling below 2,500 feet and had water in sand at 2,280 feet, indicating that the pool will not extend very far in that direction. H. L. Postlewaite's No. 1 Hicks, C SW NE Section 26-37-4e, one-third of a mile south of the discovery, is drilling below 1,860 feet and is believed to be below the second sand.

Teton County

California Co.'s No. 1 Sullivan, NE NW Section 34-27-7w, Bynum district, is drilling at 3,575 feet.

ALBERT E. LEWIS DIES

CHATHAM, Ontario, July 23.--Albert Lewis, founder and former president and general manager of the Prairie Cities Oil Co. of Winnipeg, died recently at his home in that city, aged 72. A native of Ontario, Mr. Lewis worked for various oil companies till, in 1897, he organized the Union Petroleum Co. In 1905 he disposed of his Ontario business and founded the Prairie Cities Oil Co. at Winnipeg, becoming president in 1925 and retiring in 1930.

WORTHINGTON PLANTS UNITED

The Worthington Pump & Machinery Corp., with executive offices at 2 Park Avenue, New York, and general offices at its Harrison, N. J., works, will consolidate the designing, engineering and manufacturing activities formerly carried on in its Cincinnati, Ohio, works with those of its Buffalo, N. Y., manufacturing plant. It has been the company's policy to foster the interchange of work between its various manufacturing establishments and to further this co-ordination by an interchange of key men. Necessary members of the Cincinnati works organization are being transferred to Buffalo. Service to customers will not be interrupted, it is announced. For the present the Cincinnati plant equipment will remain intact. This move in no way affects Worthington's Cincinnati district sales office which is under the management of Earl Vinnedge.

Five Completions in Central Michigan Field, Three Being Oil, One Gas and One Dry

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., July 25. Five completions were reported from the Central Michigan Field, three being oil producers, one gas and one dry hole. The recent advance in crude prices in the field is bound to bring about a heavy drilling campaign. Two advances of 10 cents a barrel have been made, the first on July 1, bringing the crude price to 75 cents, and on July 13 another 10-cent increase bringing the price to 85 cents a barrel. A general stabilization in market conditions and the demand for more Michigan crude are held as the principal factors in bringing the price increases.

The largest of the four completions is Pure Oil Co.'s No. 1 well, 330 feet from the north and east lines of the Edward O. Harris and others farm, NE SW NE, Section 15, Greendale Township, Midland County, with an initial production of 400 bbls. Same company's No. 4 well, 330 feet from the south and west lines of the Charles Mullett and others farm, SW SW NE, Section 15, same township, produced around 250 bbls. initially. Gordon Oil Co.'s test, 990 feet from the north line and 330 feet from the west line of the T. H. Taulker farm, NW NW SW Section 7, Lee Township, Midland County, is reported good for 300 bbls. initial. The Taulker farm well is an important one, far to the east of the main pool, and helps in proving the eastern border areas.

In the Vernon Township Field of Isabella County, disappointment resulted in the test of John C. Arthurs, Inc.'s No. 1 in the northwest corner of the Bowman farm, NW NW NW Section 27, which struck black water at a depth reported as 3,550 feet, and is being abandoned. Same firm's No. 2 on on the Schug farm, SW SE SW Section 22, same township, at last report was at a depth of 3,400 feet and due to drill in any time.

Strikes Gas

A gas well was recently drilled on the Joseph McGrath farm at the western limits of the village of Addison, Lenawee County, and west of the summer resort of Devil's Lake, and in the northwestern part of the county. It is planned to have experts investigate the surroundings to determine oil or gas possibilities. McGrath has a flowing well with traces of oil and considerable sulphur in the water, with a gas pressure.

Michigan Oil & Gas Co. is reported at a depth of 3,350 feet in the southwest corner of the Ira Bond farm, SW SW NE, Section 12, Greendale Township, Midland County. W. L. McClanahan's No. 1 well, 990 feet from the north line and 330 feet from the east line of the Roy Caywood farm, SE NE SE Section 36, Greendale Township, is reported around 3,000 feet. Pure Oil Co.'s No. 2 Harris, SE NW Section 15, same township, was delayed at 3,000 feet by fire believed to have started when gas was encountered in the Traverse formation.

Pure Oil Co.'s No. 2 Wampler farm, W half SW Section 19, Greendale Township, is around 3,000 feet in depth.

New Drilling Wells

New wells drilling in the East Pool, Greendale Township, Midland County, are: Pure Oil Co.'s No. 2 Edward O. Harris and others farm, SE NW Section 15; No. 2 W. A. Cassidy and others, Section 16; No. 4-B A. Barnard, SE SE Section 9; No. 5-B A. Barnard, same section; Nos. 1 and 2 A. Seeley farm, SW SE Section 9, and No. 2 John J. Bolan farm, W half W quarter NW Section 16.

Columbia Oil & Gas Co. is drilling No. 2 well, 330 feet from the north line and 990 feet from the west line of the William H. Hill, NE NW NE Section 16, Greendale Township. Old Dutch Refining Co. is drilling in the northwest corner of the John Opperman farm, SW SW SE Section 12. Wellman Oil Co. is drilling No. 2 John Bolan, SE SE NE Section 14. W. L. McClanahan, Inc., is drilling No. 1 on the Sult farm, SW SW NW Section 13.

Drilling Permits

Permits have been issued to Pure Oil Co. for a test on the Bemiss-Bond farm, NW Section 14, Greendale Township, Midland County, northeast corner; for No. 5 well, 990 feet from the north line and 330 feet from the west line of the Charles Mullett and others farm, NW NE Section 15, same township; for No. 3 well, 990 feet from the south and east lines of the George Purtell and others farm, N three-quarters E half NW Section 15, same township; for No. 4 well, 990 feet from the north line and 330 feet from the east line, George Purtell farm, same section; and for No. 4 well, 990 feet from the north line and 330 feet from the east line of the Emma O. Reed farm, N half SE Section 10, same township and county. Permits were also issued to the Isabella Oil Development Co. for No. 3 well, 660 feet from the south and west lines of the Keeler-Mitchell farm, SW NE Section 9, Broomfield Township, Isabella County; to the Braden-Saunders Co. for No. 3 well, 990 feet from the south line and 330 feet from the west line of the Kate Stapleton farm, NW SW NE Section 13, Greendale Township, Midland County. A permit issued to W. A. Robinson for No. 1 Skinner on Section 11-18-30 has been cancelled and the following location substituted: W. A. Robinson for No. 2 N. J. Skinner well, 330 feet from the south and east lines of the farm, in the SE SE SW Section 9, Greendale Township, Midland County.

George C. Hanners has spudded in on the northeast corner of the Keeler-Mitchell farm, NE NE NW Section 9, Broomfield Township, Isabella County. Isabella Oil Development Co. is starting No. 3 in the center of the SW NE Section 9, same township, also on the Keeler-Mitchell farm. George C. Hanners is drilling in the northeast corner of the Henry A. Welsh farm, NE NW NE Section 25, Isabella Township, Isabella County. Homer C. Leonard, trustee, is drilling in the northwest corner of the Leon C. Slents farm, NW NW SE Section 22, Vernon Township, Isabella County.

Varner & Lockwood made a location on the O. L. Flood farm, Section 24, Pentwater Township, Oceana County. W. Hunter Atha is drilling 660 feet from the south and west lines of the Thomas A. Murphy farm, SW NE Section 22, Richmond Township, Saginaw County.

The 3 and 4-inch pipe line of the Producer's Pipe Line Co. from the East Greendale Pool has been completed. This line is capable of moving over 4,000 bbls. a day. Some of the oil will be shipped from North Bradley to Muskegon via Pere Marquette Railroad. The remainder will be shipped to refineries operating in other parts of the country. Owned by the Producers Pipe Line Co. and built at a cost said to be in excess of $25,000, the line will serve as a valuable unit in the conveying of oil from the East Greendale Pool. Several of the independent companies have already been contracted by the pipe line for their crude output.

Schaefer Well In

Adding proved territory to the east extension of the East Oil Pool of Greendale Township, Midland County, W. L. McClanahan's No. 1 Schaefer farm, in the southwest corner of the lease, SW SW SW Section 12, shows for a commercial producer of assured importance. The well is 1½ miles east of the No. 1 Struble, East Pool landmark. When the drill had only fairly entered the pay formation the well made three flows totaling 47 bbls. and oil men estimated it a 500-bbl. producer. This well is but a short distance northwest of No. 1 on the Stapleton, discovery well of the east extension, which was brought in several weeks ago with an initial of around 1,000 bbls. in 24 hours. Several good strikes made to the east of the big group of East Pool wells have stimulated operations in the east extension area and many new locations are being cleared preparatory to drilling.

First Two Gassers in Conroe Field Not Drilled Deep Enough to Discover the Oil Horizon

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 25.—Conclusive proof that the first two wells in the Conroe Field, Montgomery County, both of which were completed as wet gassers were not drilled deep enough at that time to get the oil pay was given late in the week by the completion of Heep Oil Corp.'s No. 1 Cartwright, John Davis Survey, flowing at the rate of 63 bbls. of pipe line oil hourly from sand at 5,165-86 feet after deepening from 5,078 feet, the original completion depth.

This well, at the time it was brought in a wet gasser last April, was the second well in the field, being 1½ miles to the northeast of the discovery well, G. W. Strake's No. 1 South Texas Development Co., in the Theodore Slade Survey, which had been completed the preceding December as a wet gasser at a total depth of 4,991 feet. It now is considered almost certain that the latter well, if deepened, also could be made an oil well.

The bringing in of those wells as gassers was largely responsible for the lack of interest which was displayed in the Conroe district for several months as it was not until after the drilling of two additional tests, both of which drilled on through the high-pressure gas horizon and were completed in an oil sand found below, that important activity got under way. The doubt that the area was anything but a gas field retarded trading and discouraged drilling. If the discovery well or the Cartwright well had been drilled on down at first there might have been a different story about the field.

The oil horizon in these wells now is believed to be in the true or "orthodox" Yequa, in which more uniform and consistent sand bodies are anticipated. This is distinct from the overlying high-pressure gas production which is in that age which has been designated by some paleontologists as being Cockfield, a sort of transition age between Jackson and Yequa and called by some Cockfield (upper Yequa) and others simply as a part of the Dibollensis (basal Jackson).

The depth at which the Cartwright well topped the sand is 161 feet lower than Strake Oil Corp.'s No. 2 South Texas Development Co., the first well to drill down to the oil horizon, and about 65 to 70 feet lower than Heep Oil Corp.'s No. 1 Freeman, another well in the oil pay and located approximately three-quarters of a mile to the east and south of the Cartwright well, indicating a dip of sand in that direction not shown in the Hockley marker, in which there was only a slight dip.

Find Shallow Sand

One of the most important developments at Conroe during the week, however, was the finding of a shallow sand showing oil and gas in Humble Oil & Refining Co.'s No. 1 Dobbins, in the Ransom House Survey, more than 1½ miles southeast of the nearest producing well (Strake Oil Corp.'s No. 2 South Texas Development Co.). This sand was at 1,740-80 feet, the main part being the top 17 feet. Although this sand is not being tested, possibly because the test is rigged up for a deep hole, it gave indication of being able to make a good well. In drilling the sand the well tried to blowout and oil covered the pit. Several shallow sands have been encountered in other tests but they either have been dry or showed salt water. A productive shallow sand in the vicinity of this well may throw some radically new slants upon the structural picture of Conroe and is fuel for the fire to those who have held that Conroe is a large salt dome with the high part in the Ransom House and Strickland Surveys.

Two other tests, Alpha Oil Co.'s No. 1 South Texas Development Co., center Block 47, Alex McCown Survey, and Heep Oil Corp.'s No. 1 Hamman, Charles B. Stewart Survey, are definitely in the oil sand, both having good sand bodies. The former, located between G. W. Strake's No. 1 South Texas Development Co. (discovery well) and Heep Oil Corp.'s No. 1 Cartwright, has sand at 5,125-57 feet and is running casing. The Hamman well, an important southward extension, is in sand at a total depth of 5,129 feet and is standing cemented with 7-inch casing at 5,099 feet.

Heep Oil Corp.'s No. 1 Brent, D. W. Collins Survey, at the northeast edge of development, evidently has missed the oil pay after drilling to a total depth of 5,182 feet and will plug back. This test from 5,108 feet to its present depth has had mostly dry shale. At 5,100-02 feet it had a sand with a slight show, and at 4,977-90 feet it had a gas sand which on a drill stem test showed 600 pounds pressure.

Additional Activity

Additional activity started up in the field the past week with 18 rigs now running. New tests started included Humble Oil & Refining Co.'s No. 1 Cartwright, a south offset to Heep Oil Corp.'s No. 1 Freeman, John Davis Survey, and Lilly and Red Moon Oil Co.'s No. 1 Stella McDonald, also John Davis Survey, an east offset to the Freeman well.

Humble Pipe Line Co. late in the week was testing out its new 8-inch line from the field to Satsuma on its trunk system and by now has started running its first oil. To date there are three producers, Strake Oil Corp.'s No. 2 South Texas Development Co., Heep Oil Corp.'s No. 1 Freeman and the No. 1 Cartwright, all of which have been connected to the line. G. W. Strake's No. 1 South Texas Development Co. still is producing gas, which is supplying fuel for drilling rigs and gas for the town of Conroe, and between 50 and 60 bbls. of distillate, which is run to a small topping plant.

Colorado County Gasser

Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Survey, Section 43, wildcat gasser completed July 17, is standing shut in, waiting on connections which will be supplied by the United Gas Co. Although the well is in the middle of a 20,000-acre block, 6,000 acres of which is owned in fee by the operators, the wildcat is looked upon as one of the most important discoveries which has been made on the Gulf Coast. The well is conservatively rated as good for 50,000,000 feet of gas daily, which has a pressure of 1,500 pounds on casing and 1,450 pounds on tubing through one-quarter inch chokes. Sand is at a total depth of 4,052 feet, in which 26 feet of 7-inch screen on the bottom of a full string of 7-inch casing was set. The well at first flowed salt water but it was not long before the gas cut the water back.

This is the first production of any kind in Colorado County and the well is a good 40 miles from the nearest field. Colorado County is one of the edge Gulf Coast counties, being located along the Jackson trend, which now is receiving an active play and adjoins, to the west, Austin County, in which Raccoon Bend the nearest field, is located. The block previously had been worked geophysically and a number of core tests also had been drilled. The area had been turned down by nearly all the larger companies. Although a salt dome has been indicated here no domes as yet have been proved in the county. An interesting side light on the discovery is that Governor J. G. Winant of New Hampshire is one of the largest backers of the development there.

Rabbs Ridge

In the salt dome district, interest was directed at Rabbs Ridge, Fort Bend County, where Humble Oil & Refining Co.'s No. 4 Lockwood blew out and caught fire after cratering and swallowing the 122-foot derrick and large rig. The well blew out while drillers were coming out of the hole with a core at 4,520 feet and immediately started cratering. It did not catch fire until after a couple of hours and until after the machinery had disappeared from view. The crater now is some 200 feet across and fire fighters who have visited the blaze say it is one of the worst well fires they have ever seen.

The sand from which the blowout occurred is primarily a gas horizon and has a tremendous pressure. Three other wells in the field have been lost by blowouts while drilling through the horizon although none of the others caught fire. The oil production is from a deeper sand at 5,200-5,300 feet and this is not expected to be affected by the blowout unless there is some connection. No wells have been completed in the gas sand which before has been passed up. However, that oil has come in since the fire began is indicated in the blaze. Only 1,000 feet of surface casing was in the hole at the time of the blowout, and it is expected the fire will be a difficult one to handle. Up to now it has been permitted to blow with the hope that the walls would cave far enough down to shut off the flow.

Port Neches Field

The Texas Company made a good northeastward extension to its Port Neches Field in southwestern Orange County with the completion of its No. 3 Stark, which made 75 bbls. in the first hour and which is rated as a 1,000-bbl. well. The fluid showed 7 per cent b.s. and mud but the well had not cleaned itself. Production is through a five-eighths-inch choke with pressure of 120 pounds on tubing and 150 pounds on casing. Sand is at 3,473-89 feet with 20 feet of screen set.

High Island

Two additional good wells at High Island were among completions reported in the Gulf Coast, these wells being Yount Lee Oil Co.'s No. 2 Nellie League and No. 11 Smith, the former being brought in flowing 1,080 bbls. and the latter 1,500 bbls. These are two in a series of good wells which Yount Lee Oil Co. has been bringing in in that field in a development program in which five rigs are being kept active.

Barbers Hill

At Barbers Hill, McAlbert Oil Co.'s No. 2-B Higgins, southeast side of the dome, was completed flowing 530 bbls., 5 per cent b.s. and water, from a sand at 3,216-46 feet. This sand, close under the salt, formerly had been passed up when the hole was drilled to a total depth of 5,197 feet and was completed as a 360-bbls. well last month.

Galveston County

Humble Oil & Refining Co. has made location for what promises to be an interesting deep wildcat in the extreme southern part of Galveston County in what is known as the Green Bayou district. The location is No. 1 Elias V. Rosenkranz in the center of the N half of Lot 10, Sarah White Survey. This is a geophysical prospect which has been looked upon with considerable favor although the Humble location is the first deep test to be started in the area.

Gulf Coast Fields and Wildcats

Week Ending July 23

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract	Drlg. shale and lime 1,575 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Hogg et al's No. 1 Hogg, Martin Varner Sur., 1,250 ft. N and 125 ft. E of Sw cor. of Gulf, W. C. Hogg 200 ac.	T.D. 4,840 ft. in water sand; plugged to 3,200 ft.; drlg. sidetracked hole.

BARBERS HILL—CHAMBERS COUNTY

R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
McAlbert Oil Co.'s No. 2-B Higgens (D.D.), William Hodges Sur., 265 ft. from N line and 50 ft. from W line of tract	Old total depth 5,197 ft.; sidetracked to sand 3,216-46 ft.; set 30 ft. of 5-in. screen; comp. flowing 530 bbls. fluid, 5% b.s. and water, ¾-in. choke.
Mills Bennett Prod. Co.'s No. 1-B Barber (W.O.), Henry Griffith League	Rig up to workover 5,320 ft.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Drlg. shale and lime 4,592 ft.
Mills Bennett Prod. Co.'s No. 3 Kirby, Henry Griffith League, 645 ft. E, 40 ft. S. NW cor. of tract	Sand showing oil 4,379-4,409 ft.; reaming to set 9⅝-in. csg.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Cmtd. cavity 4,882 ft.
Sun Oil Co.'s No. 3 Smith (W.O.), W. D. Smith Sur.	Drlg. hard sand 5,437 ft.

(Continued on Page 120)

Eleven Completions North Louisiana-Arkansas; Four New Wildcats Started in Four Parishes

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 25.- -The 11 completions in this division during the past week consisted of four oil wells, all from the Zwolle Field, two gas wells and five dry holes. All of the producers had a small initial flow and were inside the proven area. One of the dry holes was a wildcat, the other four semiwildcats in the Zwolle area. Activity in the North Louisiana district continues on the incline with an average of a dozen new locations each week in Zwolle and from two to three new wildcats starting every seven days.

The best well of the week was Ben F. Smith's No. 1 fee (Turner), Section 4-7-11, in the eastern part of the field. The well first tested 4,000,000 feet of gas with a heavy spray of oil from 2,276 and 2,301 feet, was deepened to 2,346 feet, resulting in the same gas flow with 135 bbls. daily of pipe line oil. One mile southwest of this test, Pelican Natural Gas Co.'s No. 14 Louisiana Long Leaf Lumber Co., Section 8-7-11, failed to come up to expectations. The well was completed at 2,404 feet pumping 10 bbls. of oil and 40 bbls. of salt water. In the southeastern extension, F. G. Reed's No. 2-A McNeely, Section 14-7-11, was completed as a 40-bbl. pumper from 2,508 feet. The other producer was a small flowing well on the western flank of the field, southwest of Zwolle. Lion Oil Refining Co.'s No. 1 LaRoux, Section 3-7-13, is flowing 30 bbls. daily through 2-inch tubing from 2,465 feet.

A small gasser was reported from Ouachita Parish with the completion of J. J. Potts' No. 2 Robertson-Reid, Section 11-18-4e, with an initial flow of 1,200,000 feet and 680 pounds rock pressure from 2,213 feet. A wildcat northeast of the Zwolle Field in Natchitoches Parish failed to get a good show from sand above the chalk or to encounter a producing crevice in the chalk rock and was abandoned at 2,717 feet. The test was H. W. Perritt's No. 2 Brown Lumber Co., Section 29-8-9. The log of the well gives the top of the chalk at 2,614 feet. Two semiwildcats to the east and west of the southeastern extension of Zwolle had barren results. A. D. King, trustee's No. 1 J. J. Andries, Section 15-7-11, was dry and abandoned at 2,715 feet, and the same operators' No. 1 Germain, Section 7-7-10, was abandoned as a duster at 2,685 feet. North of the western production, C. D. Neff, trustee's No. 1 Peterson, Section 36-8-13, was abandoned as dry at 2,405 feet, and Howard Russell's No. 1 Porter, Section 7-7-11, was dry and abandoned at 2,545 feet.

The Hinds County area in the Jackson Field, Mississippi, furnished the other gasser. Joe A. Baker and others' No. 1 Hudson, Section 11-5n-1e, had an initial flow of 20,000,000 feet of dry gas from 2,454 feet.

New Wildcats

Four new wildcat tests are either spudded in or are rigging up on blocks in four parishes of North Louisiana. About 7 miles south of the Cotton Valley Field in Webster Parish, George Pearce and Glenn McFaddin are moving in rig on thir No. 1 Ambrose Section 22-20-10. A block of 3,000 acres has been assembled with a contract to drill a 3,000-foot test. In Ouachita Parish, Monroe Oil & Royalties Co. has set 10-inch at 102 feet in its No. 1 Thieler, Section 34-18-2e. The wildcat is about 7 miles west of Monroe, not far from the Lincoln Parish line. Feazel & Kalil are rigging up to drill No. 1 Davenport, Section 28-21-6e, 3 miles southeast of Bastrop in Morehouse Parish. A block of about 5,000 acres was completed by these operators four months ago. Southeast of Many, near the village of Fisher, Sabine Parish, the Triangle Drilling Co. is rigging up on its No. 1 Louisiana Long Leaf Lumber Co. in Section 11-6-11. The test is located on a block of 2,000 acres with a good geological report.

Webster Parish

R. E. L. Silvey of Overton, Tex., has started blocking acreage just west of the town of Minden in Webster Parish, and will assemble 20,000 acres between this point and the Bellevue shallow field in the eastern part of Bossier Parish. The acreage centers around Section 11-19-10 and the contract calls for a 4,500-foot test to begin by October 15, within 5 miles of the above-given section. Numerous shallow tests have been drilled in this area since shallow production was discovered in the Bellevue Field, but this is the first test in Township 19, Ranges 10 and 11, to carry a drilling contract below the Blossom sand. It is believed that a 4,500-foot test will take in the Trinity horizon in this area.

Another block is reported in the making north of Homer in Claiborne Parish. Robinson & Aurand have assembled 5,000 acres, centering around Section 8-21-7, with a contract to drill a 2,200-foot well. This test is in the vicinity of the Leue Oil Co.'s No. 1 Kinder, Section 2-21-7, which is arranging to resume operations to the 4,500-foot level. The Leue well was abandoned in July, 1931, at 3,323 feet. It is also reported that this operator has a 7,000-acre block east of Homer toward Junction City, Ark. The Sugar Creek gas field reports one new operation, the United Gas Public Service Co. is rigging up on its No. 1 Warren Brown in Section 1-19-6. This field and the production is owned jointly by this company, the Standard Oil Co. of Louisiana and the Triangle Drilling Co., discoverers of the Trinity gas production in that area.

Deep Test in La Salle

A wildcat of interest will be drilled in the near future in La Salle Parish, 10 miles east and north of the Urania Field. The Exchange Petroleum Co. owns 50,000 acres in fee centering around Section 21-10-3e, and the reports are that a 5,000-foot test will be made on the block. Gulf Refining Co. drilled a test during last year to 5,043 feet in Section 10-9-2e, and Arkansas Fuel Oil Co. drilled to 6,463 feet in a wildcat in Section 24-10-1e, testing 50,000 feet of gas in the well from 4,252-57 feet. The Exchange block is reported to be on a high subsea structure.

Wildcat Operations

None of the wildcats in the four states of Louisiana, Arkansas, Mississippi and Alabama was on test during the past week. A test in Beauregard Parish, De Ridder Development Co.'s No. 1 McMahan, Section 33-2s-9w, is reported to have cored several streaks of sand below 1,100 feet where 6⅝-inch casing was set. The last report from this test is coring at 1,188 feet. An old well drilled in this vicinity in 1904 cored an oil-bearing sand from 1,202-4 feet. It is probable that a deep test will be made on the block after drilling several shallow wells.

Other wildcat drilling operations follow: Bienville Parish, Black Lake Development Co.'s No. 1 Holston, Section 17-18-6, drilling at 2,304 feet; Caddo Parish, Louana Oil & Gas Co.'s No. 1 Cushman, Section 33-19-16, drilling at 1,260 feet. This test had a show of gas from the top of the Nacatoch at 768 feet to 810 feet. The top of the chalk was logged at 959 feet. DeSoto Parish, J. M. Bridges' No. 1 Joiner, Section 33-11-12, drilling shale at 2,550 feet. The top of the Nacatoch was encountered at 1,230 feet, the top of the chalk at 1,355 feet with the base at 1,847 feet. In the northern part of DeSoto, Donley & Chastain's No. 1 Smith, Section 31-14-15, is drilling at 2,460 feet. This is an old well drilled by the Keatchie Oil & Gas Co. and abandoned during 1931 at 2,295 feet.

A semiwildcat in the southwestern part of the Zwolle Field has extended production one-half mile west over into Section 4. Although not officially completed, Cliff Oil & Gas Co.'s No. 1-A Martinez School, is standing with 1,000 feet of oil in the hole from a total depth of 2,450 feet. In the same area, Loring Oil Co.'s No. 1 Martinez, Section 3-7-13, is checking high, with the top of the marl at 2,047 feet. Six-inch casing was set at 2,050 feet and a drill stem test developed a good flow of clean oil for 10 minutes from 2,066 feet.

Daily Average Runs

The fields of North Louisiana and Arkansas decreased 375 bbls. daily during the past week, the former declining 415 bbls. while the latter had a slight gain of 40 bbls. The daily average runs from the several pools were.

NORTH LOUISIANA

	Bbls.
Caddo light	5,100
Caddo heavy	1,925
Cotton Valley	760
DeSoto and Red River	1,960
Elm Grove	310
Haynesville	4,070
Holly	240
Homer	2,890
Pleasant Hill	280
Sarepta-Carterville	890
Urania	3,640
Zwolle	7,850
Total	29,915
Total previous week	30,330
Decrease	415

ARKANSAS

Champagnolle	1,810
El Dorado	3,110
Lisbon	490
Nevada	980
Smackover light	2,920
Smackover heavy	24,140
Stephens	705
Urbana	S.D.
Total Arkansas	34,155
Total previous week	34,115
Increase	40
Total both states	64,070
Total previous week	64,445
Decrease	375

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BEAUREGARD PARISH

Company, well, farm name, section and block— Remarks:

DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w ..... Coring 1,188 ft.

BIENVILE PARISH

Blacklake Dev. Co.'s No. 1 Holstow, 600 ft. W, 100 ft. S, NE cor. SE SE, Sec. 17-18-6 ..... Reaming 2,304 ft.

CADWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4 ..... S.D. 3,712 ft.

Hudson et al's No. 1 Burton, Sec. 35-12-2e ..... S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6 ..... T.A. 3,097 ft.

CLAIBORNE PARISH

W. E. Rembert et al's No. 1 Hunt, 150 ft. N and E, SW cor. E half NE NE, Sec. 18-23-8 ..... Rigging up.

DE SOTO PARISH

J. M. Bridges et al's No. 1 Joiner, 660 ft. S and E, NW cor., Sec. 33-11-12 ..... Drlg. shale 2,550 ft.

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW, Sec. 12-10-11 ..... Set 10-in. 60 ft.

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15 ..... Drlg. 2,460 ft.

S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14 ..... S.D. 2,970 ft.

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15 ..... Coring 3,735 ft.

DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12 ..... Rigging up.

G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor. Sec. 30-12-12 ..... Set 10-in. at 101 ft.

Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13 ..... Reaming 2,714 ft.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 220 ft. E, SW cor. Sec. ..... W.O.S.R. 1,585 ft.

O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e ..... Derrick.

MOREHOUSE PARISH

Feazel & Kalil's No. 1 Davenport, Sec. 28-21-6e ..... Rigging up.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. 2,010 ft.

Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11 ..... S.D. 1,875 ft.

R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW ..... S.D. 1,700 ft.

H. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW, Sec. 3-8-9 ..... Drlg. 2,840 ft.

H. W. Perritt's No. 2 Brown Lbr. Co., 300 ft. N and W, from center Sec. 29-8-9 ..... Dry and abd. 2,717 ft.

Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 ..... S.D. 691 ft.

Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6 ..... S.D. 2,504 ft.

OUACHITA PARISH

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW, Sec. 34-18-2e ..... Set 12-in. 100 ft.

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE ..... S.D. 3,480 ft.

(Continued on Page 124)

Bee, Caldwell, Colorado Counties Each Reports Discovery Wells Completed During Week

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 25.—Three discovery wells were completed last week, one in Caldwell County, one in Bee County and one in Colorado County, and the second producer was completed in the new pool in Webb County, 3 miles southwest of the Carolina-Texas Pool.

All three of the discovery wells had previously indicated on drill stem test what they were likely to do. C. J. Webster Oil & Gas Co.'s No. 1-A McCrory in Caldwell County is really the second test in the field. The first was No. 1 McCrory and was a small well in the top of the Edwards lime at 2,278-79 feet but was abandoned after a shot in the Buda lime section to increase the production shattered the casing so badly that pump equipment could not be got in. No. 1-A McCrory, 100 feet northwest, is in a crevice in the Austin chalk at 2,083 feet and came in Thursday afternoon flowing a solid stream of oil through 2½-inch tubing.

C. F. Nichols' No. 1 Harris, in Bee County, according to the guess of a good many oil men, has opened a big and important pool and because the acreage is held in small tracts there is likely to be quite a lot of drilling. The Texas Company is sitting with an 80-acre tract immediately west of the producer and seems to have the biggest close-in block.

Nichols sold a half interest in the well and 30 acres to H. H. Weinert and C.R.&M. Drilling Co. His test is on a structure as shown by his getting the Pettus sand only about 100 feet deeper than in the Pettus Field though he is down dip 3 miles or more and normally would get the Pettus sand about 300 feet lower than in the Pettus Field. Also surrounding him at distances of 2 to 3 miles in every direction there are wildcat tests that got pronounced showings of oil or gas, and it is figured now that these were edge propositions. The showings were so good that the operators spent considerable time trying to make them produce. Edwin M. Jones drilled three tests on the Rapp land 2 miles west before abandoning the effort; Cosden drilled on the Stultfus 2 miles east, Henshaws on the Beck 3 miles southwest, and Price on the Weiss 3 miles northeast.

Nichols' No. 1 Harris came in Wednesday evening and for the 12 hours ending at 6:30 Thursday morning flowed 304 bbls. with 545 pounds pressure on five-eighths-inch choke and 825 pounds when shut in. The oil is about the same gravity and quality judging from appearance as the Pettus crude, and the initial production of the discovery well puts it in classification with the Pettus wells as to size. It is so near the Pettus Field that pipe line facilities can soon be extended to it, and it is only about 1¼ miles east of the Southern Pacific Railroad.

There is nothing in the way of dry holes to prevent the new field from being one of considerable size both in length and breadth, as large at least as the Pettus Pool, which is about 3 miles long and a half mile wide at its widest point.

Webster's New Pool

No wild drilling campaign will follow the bringing in of the new pool by C. J. Webster Oil & Gas Co. following the completion of No. 1-A McCrory. The well is in the center of an 800-acre block and the Branyon crevice well of The Texas Company on the southwest and the Buchanan Pool on the northeast fix the ultimate limits of the field, which will not be more than about 2 miles long and all on the acreage block of the company.

No. 1-A McCrory was turned into steel tanks, but had not been gauged at last reports. There were two 500-bbl. tanks on the lease and two more were to be built at once.

Because of No. 1 McCrory producing oil from the Edwards lime at 2,278-70 feet it is believed there is a chance for other tests producing when drilled into the Edwards lime, though frequently crevice producers have been surrounded by dry holes. The next test drilled on the Webster block will probably be about a quarter mile southwest and will go to the Edwards and the location will be made with the idea of getting Edwards production but getting the formation a little higher than did No. 1 McCrory.

Colorado County

Coyle-Concord Oil Co.'s No. 1 Nelson, in southern Colorado County, in connection with the new pool opened by Nichols' No. 1 Harris in Bee County and the activity in Duval County and the Conroe area is serving to keep the attention of the oil industry on this long strip of Reynosa outcrop. Coyle-Concord's No. 1 Nelson is a little south of the Reynosa outcrop but in the same general belt of activity. It flowed water at first but at the end of an hour came in gas and is estimated at around 80,000,000 feet of gas. Later it is reported showing a little very high gravity oil which had not been analyzed. The company has not yet announced further plans, but it is safely expected further efforts will be made to locate oil on the block of leases.

Northern Duval County

Additional producers were completed in the North Government Wells Field in Duval County, but they added only production. They were all proven locations. Furthermore, Byrd's No. 1 Wright, reported last week as extending the field 4,800 feet northeast, went to water. It was deepened to 2,311 feet from 2,307 feet and at first put out oil at the rate of around 2,000 to 3,000 bbls. a day for a short time and then went to water. It has been plugged back about 6 feet and there is hope it will still be a producer.

The feature about this test and also the Windsor Oil Co.'s No. 1 Cummings, located between it and the discovery well of the field, which came in a flowing oil well, is that they got the sand lower than in the discovery well, and yet the Byrd's No. 1 Wright made gas. It leads to the idea that there is a cross fault at the north end of the field.

Petroleum Finance Corp.'s (Luse & Russ) No. 1 Hahl, a half mile south of production, is still standing at 920 feet, delayed by lack of water and making slow progress when drilling due to using a small rig. It is the most important next test as it has an opportunity to extend the field considerably to the south.

Bissonet & McGinley have made a location in the southeast corner of Survey No. 48, a quarter of a mile west of production at the north end of the old Government Wells district. Some gas was developed west of oil production in the original pool and Magnolia drilled and completed two oil wells west of the gas production, and the theory was that the field was on a fold and that oil production would be found on both flanks. Magnolia had about all the acreage to the west and has not sought to develop it. The new location is a half mile due north of the Magnolia's two oil wells and may test out that idea and may also have some important bearing on the extending of the North Government Wells Pool.

A new wildcat location was announced the past week. Buchanan & Frates and others made location for No. 1 Hagist in the center of the southwest quarter of Survey 267 for a 2,500-foot test about 8 miles north and slightly east of the North Government Wells Pool. It will be interesting, as will any test off to the north and northeast because of the liability of someone popping into another Reynosa escarpment pool. Derrick was built last week.

New Webb County Pool

Rosenberg completed another producer, the second, in the new pool 3 miles southwest of the Carolina-Texas Field in Webb County, and it is said to be a better well than the first. The discovery well is No. 2 Laurel and the new producer No. 3 Laurel, although some carry them as No. 3 and No. 4 Laurel. No. 3, the second producer, is 600 feet south of the discovery well and started to flow after being swabbed two hours and in a short time was making small heads and later went over the crown block. It is estimated at around 300 to 400 bbls. on the pump and total depth is 2,243 feet and total depth of the discovery well is 2,244 feet.

Newton Drilling Co. is starting No. 1 A. Garcia in the center of Survey 52 about 2 miles north, and O. W. Killam is starting a test in Survey 1,100 about 1 mile south. These are the first to be started outside of the Rosenberg block.

Caldwell County

Some new tests were started around the new Dunlap Pool in Caldwell County, northwest of the town of Luling, and three of them are down at pay depth but without production thus far. The district was looking better, however, than it did the week before, due to Bob Rose's No. 1-B Walker, which improved in appearance. It had a bridge at 1,950 feet, but 1,300 feet of oil above the bridge, and was trying to knock out the bridge. This test is a mile northeast of the two producers. Smilock Oil Co., a west offset to the discovery well, is still milling out a bailer lost in the hole that thus far has prevented getting a good test.

Sal-Mar District

In Guadalupe County only one test has got down to pay depth in the new Sal-Mar district 6 miles east of Seguin, and it is A. W. Wormser's No. 1 Pfullman, 450 feet west of the discovery well of Sal-Mar Oil Co. on the Zunker land. It is down 2,031 feet and topped the chalk at 2,013 feet. The discovery well topped the chalk at 2,022 feet and has total depth 2,042 feet. Wormser's No. 1 Pfullman is dry in the chalk but may be carried down to the Edwards lime.

Western Lee County

Paton Brothers' No. 1-A Turner in western Lee County, on the Tanglewood fault, was below 5,000 feet the middle of last week and is scheduled for the Edwards lime, or 6,000 feet. This is one of the most important wildcats in Southwest Texas and this week or next will probably return a verdict on the Edwards being productive or not at that place.

Wildcat Operations in Southwest Texas

Week Ending July 23

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1	T.D. 2,980 ft.; standing.
BANDERA COUNTY	
F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 70 ft.; drlg.
BEE COUNTY	
Fitzgerald & Pryer's No. 1 Albert Johnson in M. Alcorie Sur.	Location.
Howeth & O'Neal's No. 1 King ranch, 660 ft. from N and W lines of Kleberg 140-acre tract in Robert Stevenson Sur.	Spudded in.
C. F. Nichols' No. 1 J. P. Harris, Durango grant east of Tuleta	T.D. 4,098 ft.; flowed 304 bbls. in 12 hrs.
C. F. Nichols' No. 1 Kimball, 225 ft. N, 40 deg. W of Grayburg Oil Co.'s No. 1 Kimball	Set surface csg.
BELL COUNTY	
Alex Krause' No. 1 W. P. Edds, 650 ft. from S line, 150 ft. from W line of 100-acre tract in M. Moreno Sur.	T.D. 500 ft.; S.D.
BEXAR COUNTY	
Amerada Petroleum Corp.'s No. 1 Peter Kiolbassa, 1,000 ft. from E line, 600 ft. from S line of 100-ac. tract, A. Mancho Sur., 4 miles SE St. Hedwig	T.D. 1,826 ft.; testing.
Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 1,040 ft.; set 4½-in. csg.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 900 ft.; no report.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur.	T.D. 1,900 ft.; drlg. in Edwards.
Moore-Jauer's No. 1 Holly R. Ellison, 2,916 ft. from E line, 1,500 ft. from S line of farm in T. York Sur.	T.D. 1,953 ft.; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry
Jones & Voltz' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio	T.D. 1,330 ft.; S.D.
C. J. Webster Oil & Gas Co.'s No. 1 San Antonio Suburban Irrigated Farms, 200 ft. from S and W lines of Farm Lot 2, Blk. 49, in SW Bexar County	T.D. 200 ft.; set 10-in.
BROOKS COUNTY	
Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2,168-ac. tract in SW part of county	T.D. 1,502 ft.; drlg.

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Revival of Development Work in Central West; Good Strike in Bowling Green, Ky., Field

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 25.—The week showed a revival of development work in most of the divisions of the Central West Field, comprising northwestern and Central Ohio, Indiana, Illinois, and Kentucky, and if reports come true field work will be rather rushing as wildcat territory is being closely looked over in all parts of the large area covered by these divisions. In the old Lima Field of northwestern Ohio two completions were reported. In Seneca County, known as the Tiffin Field, the Tiffin Industrial Gas Co. brought in a light gas well in a second test on the C. Swartzmiller farm, Section 35, Liberty Township. Three new wells are under way in Liberty Township, where the Sandusky Gas Co. is drilling No. 3 R. M. Martin farm, Section 25; Tiffin Industrial Gas Co. is drilling on the John F. Snyder farm, Section 35, and Flo B. Horner is drilling on the Anthony F. Brickner farm, Section 34, same township. In Eden Township, Seneca County, D. R. McCray has abandoned Nos. 1, 2, 3, 4 and 5 W. S. Burns farm, Section 16. Michael Machelvich is drilling on the H. and C. Shumkaer farm, Section 10, Hopewell Township.

L. W. Wells and others drilled a dry hole on the William Sorg farm, Section 36, Washington Township, Sandusky County. The Ohio Oil Co. abandoned Nos. 3 and 4 John Kranz farm, Section 12, Woodville Township, same county. O'Brien and others are drilling on the C. J. Rice farm, Section 17, Ballville Township, same county.

In Montgomery Township, Wood County, the Van Vleck & Stowe Oil Co. abandoned Nos. 1, 2, 3, 4, 5 and 6 Ellen Daily farm, Section 4, and in Freedom Township, Clarence Daniels and others abandoned Nos. 1 and 2 John Schwartz farm, Section 29.

Upper Sandusky Oil & Gas Co. is drilling No. 3 on the Charles Neate farm, Section 28, Crane Township, Wyandot County.

CENTRAL OHIO

Fourteen completions were reported from the Central Ohio Field, of which four were producers with an initial production of 15 bbls., five dry holes and five gas wells. This is the best week's development in the large field for a long period.

In Ashland County, Stewart and others' No. 5 on the W. S. Brubaker farm, Section 29, Perry Township, produced 2 bbls. from the Berea sand from 731 to 758 feet. Faulkner & Phelps are drilling No. 5 on the Guy Z. Humm farm, in Mohican Township, Section 29, same county.

In Huron County, Fitchville Township, G. W. Heinrih and others brought in a shallow gas well on the H. H. Johnson farm, Section 28, at a depth of 366 feet.

In Medina County, Chatham Township, Edson Sons Co.'s No. 40 Marcus A. Frank farm, Lot 20, was dry from 334 to 397 feet, and No. 26 on the A. W. Shaw farm, Section 4, produced an initial of 10 bbls. from 265 to 314 feet. Oko Oil & Gas Co.'s No. 32 Sanford-Watson farm, SE Section 10, same township, produced 5 bbls. in 24 hours.

In Summitt County, Franklin Township, Cameron and others' test on the F. H. Mason farm, Section 13, is a light gas well in the Clinton formation, from 3,963-75 feet.

In Licking County, Hopewell Township, the Wehrle Gas Co. found a dry hole on the Charles Kreager farm, Lot 33, from 3,120-58 feet. G. R. and G. W. Settles' test on the John A. Hughes farm, Lot 3, Mary Ann Township, produced 2 bbls. from 675 feet, which is the Berea sand. Emerald Petroleum Co. is drilling deeper its second test on the Sarah Little farm, Section 8, Fallsburg Township, same county.

In Athens County, Berne Township, Carpenter & Glazier's No. 4 W. B. Goddard farm, Fractional Section 24, produced 1 bbl. from the Wolf Creek sand at 92 feet. No. 5, same farm, was dry at 76 feet, and No. 6 was also dry at 53 feet. Federal Oil & Gas Co. is drilling on the C. C. Snodgrass farm, Section 36, Orange Township, same county.

Stark County failed to report any completions. East Ohio Gas Co. is drilling No. 1 Edward A. Frank farm, Section 14, Jackson Township. Nichter and others are starting a test on the H. Schriner farm, Section 18, Plain Township, same county.

In Guernsey County, W. Keith and others' No. 3 Bertha L. Smith farm, Lot 36, Jackson Township, was dry at 450 feet. George Jewell and others have a light gas well in No. 3 on the Howard Stock farm, in the Fourth quarter in Cambridge Township, at 1,049 feet.

In Portage County, Nelson Township, the Wittmer Oil & Gas Co. has a fair gas well in the Berea sand from 470 to 482 feet.

In Trumbull County, the Wittmer Oil & Gas Co. is drilling on the Dallas H. Strock farm, Section 14, Southington Township.

In Meigs County, Thomas and others have a light gas well in No. 2 on the Pearl D. Hysell farm, Section 27, Salisbury Township, in the Salt sand at 900 feet and may make a deeper test of it. A. N. Bengal's test on the Dayton Thomas farm, Section 6, Rutland Township, same county, has a fair gas showing in the Maxon sand from 1,067 to 1,107 feet.

INDIANA

Indiana oil and gas news compiled by

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New Depth Record in Canada Is Established by Test Reported Drilling at 6,700 Feet

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 23.—A new depth record for Canana has been established by McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, in the Central Turner Valley, which is reported drilling below 6,700 feet. The deep drilling record for Canada has been held since 1928 by British Dominion Oil & Development Corp.'s No. 1 in LSD 4, Section 5-20-2w5, toward the eastern fringe of the Turner Valley, which attained a recorded depth of 6,600 feet. The British Dominion well, however, encountered a fault at around 5,450 feet and never reached the Madison limestone. McLeod's No. 4 passed from the Madison into the Banff shales at about 5,560 feet, and is now apparently drilling in the carboniferous limestone. Both physically and geologically it is the deepest hole in the field, and indications are it will be carried considerably deeper for a thorough test of the lower horizons.

McLeod Oil Co. is one of the pioneer enterprises of the Turner Valley Field. It was formed nearly 16 years ago by W. E. McLeod and associates. Following the completion of Royalite's No. 4 in 1924 the McLeod company was one of the first to deepen into the Madison horizon. McLeod's No. 4 was originally started several years ago as a test of the upper porous horizon in the Madison. The log shows water at 20 feet; gas shows at 3,095 feet, 3,320 feet, 3,425 feet, 3,781 feet and 4,960 feet, and oil at 3,781 feet and 4,972 feet. The cardium sandstone marker was met at 1,090 feet, the top of the Blairmore at 2,080 feet; the Home sand at 3,110 feet and the Dalhousie at 3,390 feet. At 3,420 feet the drill got the top of the brown Kootenay sand, and the top of the Fernie shales at 3,520 feet. The drill entered the Palaeozoic (Madison) at 3,730 feet, a comparatively high point for the field.

The first commercial production was met in the porous sand near the top of the Madison at 3,781 feet, a wet gas flow with a fair recovery of crude naphtha being encountered. The crude naphtha production declined, however, and as the well was in good shape it was deepened to restore production. No appreciable results were secured, so drilling was continued, and around 4,960 feet, still in the Madison, a lower porous horizon, previously untapped by the drill in any Turner Valley well, was encountered. This horizon for a couple of years maintained a small but steady crude naphtha production.

A few months ago it was decided to carry the test still deeper. At 5,560 feet the drill got out of the Madison into a shale formation, identified as the Banff shales. Drilling was continued, and at 5,860 feet, apparently in the same horizon, a small show of light crude, with a possible production of 5 bbls. a day, was met. In the subsequent drilling, further oil streaks have been encountered showing a crude approximating 40 gravity. Some gas has been encountered, but no gas pressure tests have been made recently. There has been some doubt as to the formation, but it would appear that the drill is once more working in a limestone formation.

Central Turner Valley

New McDougall-Segur Oil Co.'s No. 5, LSD 14, Section 12-20-3w5, in the Central Turner Valley, is reported drilling below 300 feet after making the first water shutoff. The test will be carried to the McDougall-Segur oil sand for shallow production. Roy Widney is in charge.

South Turner Valley

In the far south end of Turner Valley, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling close to the Home sand at around 4,410 feet. Union Drilling Co. of Calgary is handling the contract with rotary tools. Farther north, Canadian Royalties' No. 1, LSD 9, Section 5-19-2w5, which recently resumed work at around 2,300 feet, is making new hole below 2,580 feet.

North Turner Valley

In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, has practically finished straightening hole. The hole is reported to show only 5 degrees deflection at 3,842 feet. About 2,000 feet of additional drilling should be necessary to reach the producing horizon in the Madison lime.

Turner Valley Conservation

Following the completion of the Turner Valley Gas Conservation Board's tests of flow and pressure in the south end of the Turner Valley Field, the wells of the north end were shut in and tested. Spooner Oils, Ltd., which is challenging the validity of the conservation enactments, refused to comply with the board's order to close in its wells; but acceded to an order issued by the provincial government under the Oil and Gas Wells Act of 1931. With the completion of the tests, both sections of the field were permitted to operate under the tentative schedule drafted by the board's engineers in May; pending the drawing up of a new schedule of gas and naphtha allowances. It is anticipated the new schedule will provide for reduced allowances in view of the marked pressure drop reported as shown by the recent tests in comparison with those made last August.

Commonwealth Operations

A recent report issued by Commonwealth Petroleums, Ltd., of Calgary shows that Commonwealth's No. 1, in Section 9-19-2w5, South Turner Valley, which came into production in February, 1931, had up to April 30, 1932, produced 37,003 bbls. of naphtha. The company has two tests outside the Turner Valley Field. In the Milk River district, southern Alberta, Commonwealth's No. 1, LSD 9, Section 9-3-15w4, has been standing for some months at 5,240 feet. This test is understood to have drilled through the Devonian lime, underlying the Madison; it has got occasional oil and gas shows but apparent-

ly nothing commercial. It entered the Blairmore at 2,160 feet; the Sunburst at 2,570 feet; the Ellis at 2,610 feet; the Madison at 2,740 feet and the Devonian lime at 3,840 feet. A small oil show was met in the top of the Madison at 2,745 feet, which is significant as corresponding with similar shows in the Parco-Twin River, Texas-Imperial and Hudson's Bay-Keho tests farther west. Commonwealth's No. 2, LSD 2, Section 26-2-9wpm, in the Manitou district southwestern Manitoba, has run and cemented casing at 1,917 feet for water shutoff, and is reported deepening for gas. The directors state that they are hopeful they may obtain good commercial production in one of these tests in the near future. In addition to these tests the Commonwealth company has carried on extensive structure testing on the Blood Indian Reserve in southern Alberta, where a commercial well may be started shortly. Directors of the company include Hon. E. Michener, R. J. Hutchings, L. C. West, S. A. Annand, Hon. W. H. Sharp, James Robinson and D. J. Young.

Fisher Creek Test

On the Fisher Creek structure, northwest of Turner Valley, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, is drilling in the Blairmore sand below 3,035 feet with a small gas flow and traces of oil. After some uncertainty as to the formation, the test appears to be logging satisfactorily.

Wildcat at Steveville

In the Red Deer Valley east of Calgary, Steveville Oil Co.'s No. 1, LSD 8, Section 4-22-12w4, is reported spudding in. Union Drilling Co. has the contract and is using a heavy duty cable tool outfit from the Turner Valley Field, starting with 24-inch hole. The geology indicates the lime may be reached around 3,500 to 3,600 feet. This is the first definite test in the Steveville area, and is financed by British Columbia, United States and English capital headed by W. Marler of Vancouver, British Columbia.

Keho Lake Test

In the Keho Lake district, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, is reported drilling out cement and sidetracking lost tools below 4,800 feet. The test last October got a show of high grade crude in the top of the Madison at 4,920 feet.

Montana Border Tests

On the Montana side, work has been resumed with rotary tools on the Fulton well, which was taken over some months ago at 2,900 feet by the Frye interests of Seattle. Sheldon Burden Drilling Co. has the contract to complete the test, and at last reports was working below 3,000 feet with 16-inch hole. Location is on the Blackfeet Indian Reserve east of Glacier Park and a few miles south of the Alberta boundary, in NE, Section 29-36n-12w. The venture has been incorporated by the Frye interests as the Blackfeet Petroleum Corp., and a second test will be drilled regardless of results secured in No. 1.

On the Montana end of the Red Coulee structure, Askalta Oils' No. 6, NE SW NE, Section 2-37-4w, is reported drilling below 1,720 feet.

Northern Alberta Test

In the Athabaska district, northern Alberta, Athadome Oils' No. 1, N half, Section 20-72-24w4, has completed the original contract to 1,552 feet and has contracted for 300 feet more drilling.

British Columbia Drilling

In the Sage Creek district, southeastern British Columbia, Crow's Nest-Glacier Oil Co.'s No. 1 is redrilling below 3,122 feet in a soft gray limestone, with slightly increased oil showings and some gas. It is claimed showings indicate a small commercial production of high grade crude, but the test will be carried considerably deeper.

In the Cariboo district, Patrick Syndicate's No. 1, on the Australian ranch which was standing for several months at 1,400 feet, has resumed drilling, and is making new hole below 1,600 feet. Three small shows of oil and gas have been reported.

Vancouver Gas Tests

After several months of inactivity, drilling operations are to be resumed in August in the potential gas area of the Fraser Valley near Vancouver, British Columbia. Considerable testing has been done in recent years by the International Pipe Lines, Ltd., now headed by C. S. Shippey, formerly vice president of the Missouri-Kansas Pipe Line Co. The International company drilled four wells in the Lulu Island-Steveston area, getting gas between 820 and 920 feet. Some trouble was experienced with the wells sanding up, but it is claimed this difficulty has been overcome.

An arrangement, it is reported, was recently completed whereby the Delta Gas Co. of Vancouver will undertake a drilling program on the International holdings in the Lulu Island and Boundary Bay districts. Delta's No. 1 has been located on the Albert Huff farm, about three-quarters of a mile due north of the old Boundary Bay Oil Co. deep test. Contract for the test has been let to John T. Finn, an Alberta contractor, and rigging and timbers are being moved to location. Locations are also to be made on Lulu Island and several tests may be drilled simulatenously. The International wells in this area are reputed to have secured around 500,000 feet a day at between 820 and 920 feet in a soft sand formation. Delta Gas Co. is affiliated with Northwest Securities Co. of Vancouver and was formed to develop the acreage of International Pipe Lines, Ltd.; the latter company retains a gas purchase contract and undertakes to build service lines to market commercial production.

Finish Quebec Test

A party of Petrolia drillers, including Messrs. Holmes, George McDonald, Baird and Frank Gray have left for Quebec where they will take charge of completion of a deep test now drilling near St. Hycainthe. The test, started with cable tools, will be completed with rotary equipment.

Ontario Drilling

In Lambton County, Ontario, Fairbanks Oil & Gas Lease's No. 3, close to Oil Springs, is reported to have finished dry at depth. Location was some distance north of Fairbank's No. 2 which was deepened and shot some months ago, getting a flow reported at 6,500,000 feet a day.

In the southwestern portion of Lambton County, Colonel Drake and associates of the Black Bear Syndicate are spudding in on the sixteenth sideroad about three-quarters of a mile north of Wilkesport. Stevens & Miller of Sarnia have the contract. It is understood the test will be drilled through the lime to approximately 2,100 feet.

In Norfolk County, Acme Gas & Oil Co.'s No. 9 on the Ronson farm near Mabee's Corners is a small gasser in the Clinton sand and will likely get additional production in the White Medina now being drilled. F. H. Stover & Son of Chatham have the contract.

In Pelee Island, Essex County, Pelee Oil & Gas Co.'s No. 1 on the Theodore Rinkel farm is reported shut down at around 700 feet. On the Essex County mainland, Bon Jasperson of Kingsville is spudding in a test for gas in Madison Township near Puce.

In Kent County, Olga Oil & Gas Co.'s No. 4 deep gasser in Dover Township has finished pulling pipe and plugging, as the gas production latterly has been too small for profitable operation. It is reported the Olga company is planning to do some additional drilling in its newer gas field in Raleigh Township, Kent County, where some five wells have already been drilled, of which four have been fair commercial gassers.

In the D'Clute Field, Raleigh Township, Kent County, Union Gas Co.'s No. 21, Lot 22, Concession 10, is reported drilling at 1,570 feet with a little gas showing. In the Dawn Field, Lambton County, Union Gas Co.'s No. 62, in the west end, is drilling below 1,200 feet. Union's No. 63 has been located on a line between Nos. 59 and 61 and within 600 feet of No. 61. It is reported that Leo Wilson and associates will move an outfit into the north part of Sombra Township, west of the Dawn Field, for a test.

Fairbanks Oil & Gas Lease's No. 2 in the Oil Springs Field, close to Oil Springs village, has been abandoned in the top of the Big Red formation at 2,240 feet.

In Norfolk County, Acme Gas & Oil Co.'s No. 9, Ronson farm, near Mabee's Corners, which had a little gas in the Clinton formation, is dry in the White Medina at 1,400 feet but may be deepened to test the Trenton limestone.

Interest Centers on Tests in Southeast Ohio, in Virginia and in Lower West Virginia

By STAFF CORRESPONDENT

PITTSBURGH, Pa., July 25.—Operations in the proven areas of the three districts of the lower eastern fields have reached a standstill. The fewest number of completions of record were reported during the past week and totaled but three gas wells, all fair, and two producers with an initial production of 29 bbls. There was also one dry hole drilled. In spite of the letdown in drilling there are three operations now active which are of interest and widely scattered.

In Southeast Ohio, E. E. Grimm and others have completed reaming out their test on the E. E. Knowlton farm, NW Section 10, Independence Township Washington County, to a depth of 3,548 feet, which depth was reached without production and before it was decided to drill deeper. Casing has now been set, the top of the steel rig has been altered for deeper drilling, a 170-horsepower motor has been installed, along with a steel bullwheel and band, and a 7,000-foot cable is ready to start drilling down to 6,000 feet or better if no production is met in the shallower sands. In Grandview, Independence and Newport Townships, nine other tests which were drilled to that depth or better remain shut down waiting on developments in this deep test. William Harris and others' test on the Joseph Crago farm, SW Section 11, Grandview Township, the direct cause of the drilling to deeper sands, still continues to be a fair producer making in excess of 25 bbls. a day, with the offset well to it, 200 feet away on the William Barber farm, a dry hole.

In Virginia, Davis Elkins & Co., Ed Brehm and others, and the Benedum-Trees interests are drilling in the much overturned regions in Wise, Russell, Washington and Buchanan Counties, as well as a deep test in lower West Virginia in McDowell County. These tests range in depth from several hundred feet to 4,500 feet with no reports of production.

In Southwest Pennsylvania, the American Natural Gas Co. is continuing to explore the region northeast of Somerset, in Quemahoning Township, Somerset County, with a test drilling on the Richard Lohr farm. The test is about due in the Injun sand, around 1,400 feet, where gas is expected.

SOUTHEAST OHIO

Two producers and one dry hole was the total of the week's work in Southeast Ohio. The best producer was in the shallow drilling in Chatham Township, Medina County, where E. R. Edson & Son Co. added another good well to the string of producers in a second test on the D. M. Geisinger farm in Tract 9, Lot 9. It was drilled to 365 feet and produced 25 bbls. the first day natural from the Berea grit.

In Perry County, the Allegheny Oil Co. drilled No. 24 on the Thomas and Mary Monahan farm, Section 33, Pleasant Township. It produced 4 bbls. after being shot in the Berea sand at a depth of 1,053 feet. In the same section of the township, but in the extreme southeast quarter of the northeast quarter, W. L. Altier drilled No. 11 on the Mike Semity farm. It was drilled through the Berea to a depth of 1,057 feet and is dry.

Drilling in Ohio

In Noble County Woodford Brothers have a rig standing for No. 4 on the Woodford farm in Section 15, Olive Township. In Enoch Township, Harper Brothers are down 926 feet on the D. Morland farm, Section 31. In Holmes County, Lydic Oil & Gas Co. is drilling on the Ralph Clinage farm, Section 20, Monroe Township, and has reached the top of the Berea sand.

In Monroe County, S. A. Cobb and others are drilling on the Brady Hawkins farm, Section 2, Franklin Township. In Holmes County, Reno Oil Co. is down 2,560 feet in a third well on the D. F. Pipes farm in Section 15, Richland Township. In Union Township, Morgan County, R. C. Whitener is drilling No. 3 on the S. L. and Joseph Finley farm in Section 3. In Vinton County, the Co-operative Oil Co. is drilling on its own property in Section 3, Knox Township.

WEST VIRGINIA

But one well was completed in West Virginia during the week, the gas regions being retarded by two recent severe storms and unusual cloudbursts which flooded the Elk River beyond any records of recent years and carried away many township bridges. For several days, outlying districts were out of communication, and much repair work was made necessary.

The completion was Pure Oil Co.'s No. 57 on its lease of the Federal Coal Co. tract in Sherman district, Boone County. It was completed in the Weir sand at a depth of 2,989 feet and is a fair well in excess of 400,000 feet a day.

Drilling in West Virginia

Covering the entire field by counties shows a dearth of new operations. In Boone County there are no tests drilling. In Sherman district the Pure Oil Co. has one well drilling, No. 258 on the Williams Coal Co. property which has reached 1,518 feet. In Scott district, the Cambridge Gas Co. shut down its No. 3 on the C. C. Lewis heirs farm at 1,750 feet to run casing. These are the only wells drilling in the county.

In Cabell County there are two tests drilling, both in Guyandotte district. On the F. J. Weatherington farm, C. C. Wolfe has reached 2,956 feet and has shut down for tubing. The Standard Ultramarine Co. is down 2,400 feet on its own property. In the same section, C. C. Wolfe is fishing for the bit in No. 4 on the Ben Lomond Land Co. tract at 1,750 feet. In Barboursville district, the Merritt's Creek

Gas Co. is rigging up for a second test on the Ohio River Land Co. lease.

In Calhoun County but one test is drilling. On the Louie Hamilton farm, in Washington district, C. B. Lewis and others are drilling at 900 feet. Another test, that of Holly Jarvis and others on the Hoke Jarvis farm, same district, still remains shut down at 1,400 feet. In Lee district, the Crummies Creek Fuel Co. is down 1,275 feet in a second well on the H. L. Harless farm, and in Sheridan district the Conservation Oil & Gas Co. is shut down on the top of the Injun sand at 2,140 feet in a second test on the James Kerby farm.

In Clay County drilling is suspended and no new work is in sight. In Fayette County the same condition exists. In Gilmer County two wells were completed during the past month and no new work is noted. In Kanawha County, several rigs are standing and have been for some months but there are no drilling operations.

In Lincoln County, one well is drilling. It is the Vernon Gas Co.'s No. 3 on the Roy and Hal Adkins farm in Union district, which has reached 2,090 feet. In Jefferson district, the Hamlin Natural Gas Co. has one location. The remainder of the county is inactive. Logan County is likewise idle.

In Jackson County, H. H. Sheppard and others have started drilling on the T. C. Burdette farm in Washington district. Mingo County is without evidence of any operations and Putnam County likewise. In Pleasants County M. C. Martin, Jr., is drilling on the John Carter farm in Grant district and has reached 800 feet. E. E. Pickens is at the same depth on the William P. McTaggart farm in the same district. W. H. Hammett has shut down his test on the George and Mary Jarvis farm, Grant district, at 1,300 feet.

In Ritchie County, R. C. Jackson is down 1,575 feet on the Rutherford heirs farm in Grant district. In the same district, Herbert Flanagan and others have reached 1,540 feet on the A. H. Kiger farm. The Reno Oil Co. is rigging up for a second test on the A. Matheny farm, same district. In Murphy district, the King Knob Oil Co. plugged off the sand and started drilling deeper in its test on the Albert Carpenter farm and is now at 2,557 feet. The Mary Osbourn Oil Co. is down 870 feet on the M. R. Osbourn farm, this district. In Clay district, Ross Richards and others are fishing at 1,275 feet on the L. E. Robinson farm.

In Roane County, five tests are drill-

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Central West Fields

(Continued from Page 115)

Paul F. Simpson, state gas supervisor, Department of Conservation, Division of Geology, Indianapolis, Ind., by counties, follows:

Crawford County—The Arthur Beasley test, SE Section 32, Sterling Township, drilled by Pfeiffer and others, is to be abandoned and plugged after drilling more than 2,000 feet.

Daviess County—Ben D. Ruble got a dry hole in No. 2 Bernard Gilloogy, NW Section 34, Harrison Township.

Dubois County—No record has been received of the completion of the David Neukam, Jr., test drilled by the Ohio Oil Co., SE Section 25, Harbison Township. Several small showings of gas were passed through.

Fountain County—The Rynearson test well in Cain Township, was dry after a shot at 1,740 feet. There are rumors of another test well being drilled.

Gibson County—No. 5 Agnes Haskins, drilled by the Gib-Van Oil Co. in SE Section 18, Washington Township, was completed as a 30-bbl. well. No. 1 F. P. Hope, SE Section 13, same township, was completed a dry hole by E. C. Wharf. The Big Four Oil & Gas Co. has started a third well on the Lottie Hope lease, also in SE Section 18. Same company completed the first well on the Elmer Hunt farm, NW Section 19, at 1,285 feet, finding 250,000 feet of gas. Same company is starting No. 1 Ethel Kell, NW Section 18. The Wabash Public Service Corp. has started No 1 J. N. Malone, NW Section 23, Columbia Township. Nelson Brothers completed a dry hole on the Mary R. Richardson farm, NW Section 19, Washington Township. Knox Engineering Corp. completed its No. 1 Robert L. Simms, in the northeast corner of Section 32, Columbia Township, in the Brown sand at 1,502 feet, where 5,000,000 feet of gas was found. In the SW of Section 18, Washington Township, the Big Four Oil & Gas Co.'s No. 6 Catherine Sloan started at 150 bbls. natural.

Harrison County—The Indiana Utilities Corp. is drilling No. 1 William Longbottom, SW Section 10, Webster Township.

Hendricks County—The Reitzel test in Section 8, Liberty Township, which was plugged back to the Trenton and shot, is still in the process of development with the hopes of making a well. There is a possibility of another Trenton test being drilled by the French Development Corp. nearby.

Jay County—N. E. Master and others have started No. 1 William C. Bailey, NE Section 25, Wayne Township.

Knox County—The Glengarry Oil Co. is starting No. 1 Emmett Blann, in Location 261, Busseron Township. The Ruby Hite well drilled by O. A. Thayer in NW Section 13, same township, is said to be a dry hole.

Kosciusko County—It is reported that the Kosana Oil Corp. will soon start a well between Milford and Syracuse.

Laporte County—V. S. Hollingsworth and others have started a test on the W. and C. Drollinger farm in Section 33, Wills Township, a short distance north of the test completed this spring on the Siddles farm.

Ohio County—The Southern Development Co. is drilling the Ira North test in Rising Sun.

Perry County—The Ohio Oil Co. completed No. 1 George K. Beard, SW Section 19, Clark Township, a dry hole. It drilled No. 3 on this lease, a location to the west, and completed a producer and has now moved north of No. 1 to drill No. 2. Conyers & Bugg are starting No. 5 Lee Aders, in the same section. No. 6 Frank Cassidy was completed by the same parties in NW Section 30 with 50 bbls. initial production. In the same quarter section they completed No. 3 Alvin Franchville with 5 bbls. initial production, and have started No. 4 on the same farm. Moorehead & Blank are drilling No. 2 James Cassidy, NW Section 21, Anderson Township. Collins and others completed No. 1 Emery Simpson, NW Section 30, Anderson Township, a dry hole at 519 feet. H. A. Mann is starting a test in NW Section 32, Clark Township.

Pike County—Murphy Oil Co. abandoned No. 1 L. Sepple in the NE Section 23, and the No. 5 A. M. Henning, NE Section 27, Monroe Township The Ohio Oil Co. abandoned No. 1 L. C. Thomas, SW Section 32, Patoka Township. The United Oil Corp. abandoned No 1 H. Atkins and No. 5 C. Hightower, both in Section 22, Logan Township. Claude E. Noble is starting No. 1 John Arnold, SE Section 17, Washington Township. The Indiana Southwestern Gas Corp. is down nearly 1,600 feet in No. 1 Jennie Cassidy, NE Section 32, Clay Township, and is expected to complete it an oil well. P. C. Andrews completed No. 12 Enos Loveless, SE Section 14, Logan Township, at 1,030-51 feet, where the initial production of 50 bbls. was found. H. S. Risher is down over 800 feet in No. 2 James Thomas, SW Section 19, Washington Township.

Spencer County—E. M. Treat & Co. is drilling No. 2 Catherine Bretz Section 3, Ohio Township. No. 2 Anna Hawk, drilled by the Maxwell Petroleum Corp., Section 8, same township, was a 10-bbl. well, and a third well has been started. Van's Oil, Inc., is drilling No 3 A. G. Grass, Huff Township. Steffey & Grass abandoned No. 1 Sauter, in Section 3, Huff Township. D. C. C. Taliaferro is drilling No. 2 Hugh Stuteville, Section 4, Ohio Township.

Sullivan County—No. 1 William Bell, Jr., drilled by Wyman and Brown, NE Section 25, Turman Township, was a dry hole at 825 feet. In SW Section 14, same township, Charles W. Scott completed No. 7 C. L. Davis with 1 bbl of production.

Vandeburg County—John L. Drake and others are drilling a well on the county poor farm in SW Section 33, Center Township.

Vigo County—The Cyrus L. Lane test in NE cor. Section 32, Prairie Creek Township, was dry. The twenty-second well on the William Riggs farm in Section 32, same township, is drilling by the Siosi Oil Corp.

Warrick County—Dr. C. C. Taliaferro is starting No. 1 Henry Kohle, NW Section 28, Greer Township.

It is surprising, Mr. Simpson says, that many wells, representing investments of thousands of dollars, are drilled without an exact location being known for them. "Scientific and methodical preservation of information helps everyone, so why not give the exact distances from the lines for all new locations? Some of the wells must be plotted on large scale maps, but this is impossible when accurate figures are lacking. Several drillers and promoters in Indiana who have persisted in turning in doubtful or incomplete records and logs will not in the future be recommended for contracts by this division."

Knox Engineering Co.'s test in the southwest corner of the Carl Simms farm, SW Section 22, Columbia Township, Gibson County, produced a volume of 2,500,000 feet from 1,505-13 feet.

Indiana Southern Gas Corp. drilled a test 1,650 feet from the south line and 390 feet from the west line of the Jennie Cassidy farm, NE Section 32, Clay Township, Pike County, which produced 25 bbls. from 1,521-30 feet.

ILLINOIS

Only one completion was reported from the Illinois Field, a test to the north of the Casey Field, W. D. McColpin's No. 1, in the southwest corner of the J. B. Weiland farm, NW Section 32, Embarrass Township, Edgar County, which was dry at 285 feet.

J. H. Roberts of Coffeen, Ill., writes that L. A. Painter and others are rigging up on the E. M. Gullick farm, NW Section 30-6-3, West Bond County. This is about 1¼ miles due west of the Riedmann gas well, the best gasser yet brought in in Bond County and estimated from 2,500,000 to 3,500,000 feet. The Gullick test will be in the south slope of the structure, known to geologists as the Ayers anticline in the vicinity of the village of Ayres and about 5 miles northwest of Greenville. Batchlor Brothers have the contract to drill the well.

KENTUCKY

A sensational oil strike is reported from the Bowling Green Field, in the Davenport Pool, of Warren County, in western Kentucky, that should bring about an active drilling campaign. This field developed many gushers in the past. The Bowling Green Times-Journal reports the new well as follows:

The largest oil well in Warren County since the days of the oil boom just prior to the World War, was brought in by Morris & Carpenter of Texas on the Frank Davenport farm, 5 miles west of Bowling Green on the Main Street road. The oil was struck in 6 feet of sand and has been flowing since at an estimated rate of 1,800 bbls. The well was brought in at a depth of 525 feet and is the second on the lease, the first being a pumper. Apparently, while not in direct line, the new well is probably in the Davenport Pool, which during the palmy days of the oil boom was considered the greatest in this section of Kentucky.

Other Coompletions

In Ohio County Jenkins and others' test in the northeast corner of the Sherm Bellamy farm, 2 miles east of Deanfield, is a fair gas well. S. A. Cobb and others report a dry hole 200 feet from the north line and 620 feet from the west line of the Ramsey heirs farm, 3 miles southeast of Whitesville at a depth of 577 feet.

In the Owensboro Field of Daviess County, Hupp, French and others struck a 150-bbl. producer, 850 feet from the south line and 150 feet from the west line of the Ace Bratcher farm, in the Can Run Pool, at a depth of 750 feet. Three Sands Oil Co.'s test in the northwest corner of the J. J. Mays farm, 2 miles east of Utica, which was dry. Cane Run Petroleum Co.'s No. 4 well, 75 feet from the south line and 650 feet from the west line of the T. U. Weatherford farm, in the Can Run Pool, was dry at 810 feet. Cumberland Petroleum and Kemrow Oil Co.'s test, 600 feet from the south line and 250 feet from the east line of the Abe Hamilton farm, in the Jones Pool, was a dry hole at 622 feet. Ellis & Ashby's No. 6 well, 200 feet from the north line and 600 feet from the west line of the Lena Mayfield farm, in the Jones Pool, is reported dry at 678 feet.

In Hart County, Bonneville Pool, Creech and others' No. 1 Jess Craddock farm, is said to show for around 30 bbls. initial.

In Muhlenberg County the Ohio Oil Co. drilled in a gas well estimated at 1,500,000 feet on the 5-J's Coal Co.'s land, 2 miles from Rockport. Ellis & Young's test on the Drake heirs farm, near the town of Weir, reported dry at 1,236 feet.

A fair gas showing was reported on the Neize farm, in Hopkins County, at 750 feet.

Reports from Barbourville said the Himyar Gas Field, in Knox County, has added another gas producing well on the Gray farm, near the town of Flat Lick, an extension of 3 miles from former gas producers. The Gray well is reported with a volume of around 1,500,000 feet.

Since the Hart County Field has dropped development work to a large extent the old Owensboro Field has gained a great number of operators who left the Owensboro area some months ago, and this field is now in an active drilling stage. One factor which has served to hold back a widespread drilling campaign in the Owensboro area, the restriction placed by the pipe lines on the amount of oil they will accept, has been eased to some extent, it is understood. In some quarters it is believed the restriction will be entirely removed within the next four to six weeks. This would result in increased interest being taken in the field by outside interests, it is believed by local oil men.

One of the most active development areas of the field at this time is in the Barrett Hill Pool, in northwestern Ohio County, and which crosses the division line between Ohio and McLean Counties. This activity is due to the recent good producers found in that particular area. During the past few days L. C. Young drilled in a nice producer on the Allen farm, which is rated at 100 bbls., or better. North of Fordsville, same county, Goldberg and others drilled in what is reported at around 20 bbls. in a test on the Edward Rice farm.

Gardner Petroleum Co. is drilling on the H. C. Drake farm, near the hamlet of Cromwell, in the southeastern part of Ohio County. Doc Sirmans is drilling in the Red Hill area of Ohio County on the Pegram farm. Unknown parties have started a test on the H. Brown farm, near the Hickory Grove School House, same county. Near Dundee, same county, the Hartford Development Co is drilling a second test on the Arthur Wilson farm. Goldberg and others are drilling No. 4 on the Ray Owens farm, in the northwestern part of Ohio County.

In Ohio County the Ivyton Oil & Gas Co.'s No. 12 well, 200 feet from the south line and 1,200 feet from the east line of the R. A. Miller 275 acres, 1 mile north of Haynesville, produced an initial of 50 bbls.

In the Pellville Field of Hancock County, the Cheter Oil Co.'s test on the Bessie Newton farm, a mile west of Crowe Hill, was a dry hole. The Kencal Oil Co. and others' test on the James B. McHarvin farm, near Victoria, same county, was also a dry hole.

Excess Production of Crude in Several Districts Jeopardizes California Curtailment Plan

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 23.—Continued excess production in several fields is seriously jeopardizing California's existing curtailment program and, unless operators respond at once to Umpire Pemberton's appeal for immediate effective proration, we may anticipate dire consequences. Maintenance of the existing price structure, despite a consistent overproduction during the past 10 days, does not indicate any deviation from the policy adopted by the Standard Oil Co. but rather reflects an earnest desire on the part of the company to give the newly appointed umpire ample opportunity to reduce the production of each and every field to the maximum allowable.

Kettleman Hills

Two new wells were chalked up in the North Dome of Kettleman Hills during the past week and additional completions may be anticipated during the next 30 days. Completions during the latter part of the year will be relatively infrequent in the Kettleman North Dome Field due to the failure of operators to maintain a consistent amount of new work. There has been a marked tendency to reduce drilling operations during the current year with the result that the number of drilling projects has grown consistently smaller with each succeeding month. The Union Oil Co. recently started a new well on the Amerada King lease and, while the Standard and Kettleman North Dome Association are making preparations to spud in a few new wells, this work will not be a factor in production for another six or eight months. It is quite obvious that the consistent reduction in drilling operations will tend to stabilize field production and result in fewer completions.

Kenda's latest completion in the North Dome, its second new well within the past 15 days, was No. 61-2-P, located in Section 2-22-17. This new well, which came in flowing at the rate of 6,250 bbls. per day but subsequently built up to 8,290 bbls. of 35.6 gravity oil and 6,270,000 feet of natural gas, was bottomed at 8,328 feet and finished with a 7-inch combination string landed on bottom and cemented through perforations at 7,500 feet. This new well is located in the same section in which the Milham Exploration Co. finished its discovery well a few years ago. A check of development work under way in the North Dome indicates the probability that the Kettleman North Dome Association will continue to limit its drilling operations in the North Dome for several months to come. The Association has built up a potential sufficiently high to meet any normal demand for production and has adequately protected its acreage against draining. A few new wells may be started by Kenda during the course of the next several months, but as the situation looks at present, this work will be more or less of a routine nature.

Second North Dome Well

The second well completed in the North Dome during the current week was the Standard Oil Co.'s well No. 278-33-J, located in Section 33-21-17. This new well, bottomed at 8,170 feet and finished with a 6⅝-inch liner carrying 704 feet of perforated, came in flowing 3,690 bbls. of clean 35.8 gravity oil and 4,250,000 feet of natural gas per day. The completion of these two new wells, together with No. 1 Elsinore of the North American, finished last week, has caused the daily production of the Kettleman North Dome Field to temporarily exceed its daily allotment. Both of the two new wells finished during the current week have been beaned back and production of both the Standard and Kettleman North Dome Association is down to their respective allowables. It is interesting to note that although the Kettleman North Dome Field has a maximum daily allowable of 60,000 bbls., this field has been below the permissible for several months. Completion of the North American's No. 1 Elsinore some 10 days ago has temporarily upset the pegged allowables of operators in this field but the entire situation is expected to be cleaned up within the next few days. No. 1 Elsinore of the North American has been given a potential daily production of 1,500 bbls. and an allowable of 750 bbls. per day. This well was omitted as a potential producer when operators agreed on the allowable production of the various areas in the field with the result that a slight change is now necessary in the allocation of production. The 750 bbls. of new production added will be absorbed by the Union, Petroleum Securities, Associated, Shell and Superior, with the result that the allowable production of this group will remain unchanged at 15,000 bbls. per day, although the respective allotments of the members included in this group will be subject to a slight downward revision. By absorbing the additional 750 bbls. per day resulting from completion of the North American's No. 1 Elsinore, field production will remain pegged at 60,000 bbls. daily.

Middle Dome Operations

There was no considerable change in the status of wells under way in the Middle Dome of Kettleman Hills during the past week with the exception of the additional amount of new hole added in No. 1 Bunting by the Universal Consolidated Oil Co. This well passed the 4,700-foot level before the close of the current week and, while good footage has been made up to the present time, it will be another several months before this project reaches the pay. The Standard ran into a little mechanical trouble in No. 6-29-V, an offset to No. 1 Burbank of the Petroleum Securities, with the result that further progress will be delayed pending recovery of the fish. The Standard pumped 300 sacks of cement in its Middle Dome test but, in pulling up the drill pipe, struck a snag around 7,700 feet which caused the drill pipe to part somewhere around the 4,000-foot level. One of the most significant features in connection with the drilling of this well is the fact that the company has apparently located water in the formation around the 8,100-foot level. If this is subsequently confirmed it will definitely clear up the status of the Temblor in the Middle Dome because it will indicate that water is entering No. 1 Burbank of the Petroleum Securities below the shoe of the 8⅝-inch at 7,326 feet instead of through a hole in the casing which was thought to have been caused during the course of work. The possibility still exists of course that water may be entering No. 1 Burbank from two sources, as it is known that water was flowing between the strings of pipe.

Ventura Avenue

The Associated killed its deep well in the Ventura Avenue Field a few days ago preparatory to cleaning out the hole in an effort to stimulate production. A survey conducted after the completion of No. 83 Lloyd indicated that the lower part of the hole was effectively mudded off due to the settling of the heavy rotary drilling mud and weight material which the crew was forced to use in order to keep the well under control. It is the present intention to clean out the bottom 500 feet of hole and give this well a conclusive test, at the end of which time it will be shut in as a conservation measure. No. 83 Lloyd which, until being taken off production a few days ago, was the deepest commercial producer in the world, produced 6,480 bbls. of 29.2 gravity oil and approximately 6,000,000 feet of natural gas during the 24-hour period immediately preceding the institution of corrective work. This well had an exceptionally low gas oil ratio, the average being approximately 1,000 feet of gas to each barrel of oil brought to the surface, but apparently failed to come up to expectations due undoubtedly to the abnormally large quantity of weighty material which the company was obliged to use during the course of work. In addition to resuming work on No. 83 Lloyd, the Associated successfully completed No. 108 Lloyd in the Ventura Avenue Field during the current week. This new well, bottomed at 6,930 feet and completed flowing through a twenty-eight-sixty-fourths-inch bean, showed an initial daily production of 680 bbls. of clean 29.4 gravity oil and 1,370,000 feet of natural gas.

Goleta Gas Field

The General Petroleum successfully recompleted No. 1 More in the Goleta gas field of Santa Barbara County during the early part of the week and this well was returned to production flowing approximately 25,000,000 feet of natural gas per day from 4,533 feet. This project, the discovery well in the Goleta gas field, was carried down below the gas zone in search of commercial oil production but failed to open up any new horizons and was accordingly plugged back to the original gas zone. The General Petroleum has finished three gas wells on the More ranch in the Goleta gas field up to the present, and while the company had two of these wells on commercial gas production during the past winter, their commercial life has been rather limited. It is highly probable that all three projects will go on a commercial production basis during the coming winter months, provided of course that natural gas from oil fields is inadequate to meet normal requirements.

Elwood Field

There were no developments of outstanding importance in the Elwood Field of Santa Barbara County during the past week as operators in this area are observing curtailment and are accordingly refraining from any unnecessary development. There are no drilling wells under way in this field at present, although preparations are being made to spud in a new well on Caroline Spalding's tideland drilling permit No. 92. Rotary equipment is being rigged up for early work on this new well, which has been designated as No. 6. It is located at the end of a specially constructed pier similar to those used by other operators in the prosecution of tideland development in this field.

Carpinteria

The Texas Company has finally suspended drilling operations in its Carpinteria wildcat at 4,210 feet and tentative plans call for abandonment without the addition of any further work. This well topped the Sespe at approximately 4,150 feet and thus indicated the absence of the Vaqueros formation which has proven so highly productive a short distance away in the Elwood Field. After making about 100 feet of hole in the Sespe to make sure that this formation was barren, The Texas Company suspended operations. Drilling was continued after logging the top of the Sespe in order to determine its status as the Sespe has been found productive in the Elwood Field.

Santa Barbara

Western Gulf is still held up with mechanical trouble in No. 1 Bradley, a deep test in the Santa Maria district of Santa Barbara County at 10,294 feet and an ultimate recovery, while appearing

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 9, 1932		July 2, 1932			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	147,070	987,352
Gasoline	.....	.....	194,269	27,753	4,396,351	7,922,293
Kerosene	.....	.....	.....	.....	154,372	89,109
Foreign exports—						
Crude oil	5,035	719	124,070	17,724	4,619,888	3,982,405
Fuel oil	162,211	23,173	98,711	14,102	4,760,161	7,852,921
Diesel and gas oil	9,738	1,391	65,238	9,320	1,400,953	2,149,459
Gasoline	45,007	6,430	325,369	46,481	4,992,527	5,015,314
Kerosene	.....	.....	90,815	12,974	1,335,636	809,700
Lubricants	.....	.....	.....	.....	.....	36,352
Naphtha distillates	.....	.....	44,650	6,379	120,075	.....
Coastwise-domestic—						
Crude oil	418,556	59,794	323,098	46,157	7,707,859	11,429,572
Fuel oil	184,061	26,294	146,849	20,978	6,614,809	7,238,543
Diesel and gas oil	21,489	3,070	11,563	1,652	725,353	829,448
Gasoline	340,000	48,571	231,182	33,026	8,314,194	7,331,780
Kerosene	3,646	521	.....	.....	96,341	196,654
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	79,950	11,436	231,170	.....
Gasoline	.....	.....	.....	.....	430,185	405,469
Lubricants	.....	.....	.....	.....	15,824	21,990
Foreign exports—						
Crude oil	.....	.....	.....	.....	707,651	107,736
Fuel oil	.....	.....	60,450	8,636	582,109	720,901
Diesel and gas oil	.....	.....	.....	.....	352,107	294,708
Gasoline	116,488	16,641	5,451	779	2,028,213	2,326,915
Kerosene	.....	.....	2,325	332	548,858	535,972
Lubricants	.....	.....	.....	.....	24,934	.....
Naphtha distillates	.....	.....	.....	.....	.....	20,100
Coastwise-domestic—						
Fuel oil	72,803	10,400	22,130	3,161	1,536,248	2,254,434
Diesel and gas oil	.....	.....	.....	.....	238,094	195,112
Gasoline	.....	.....	90,600	12,943	1,832,815	1,962,319
Kerosene	.....	.....	.....	.....	65,756	166,970
Naphtha distillates	.....	.....	.....	.....	.....	49,780

doubtful on the surface, may be satisfactorily effective in the near future. The drill pipe parted in this well a few days ago at 1,350 feet and efforts are now being made to recover the fish. If the drill pipe had parted lower down in the hole, which incidentally is bottomed at 10,294 feet, it would have complicated the situation and might ultimately result in the loss of the footage made up to the present. The La Mesa Oil & Exploration Co. finished No. 1 Ross in the Santa Barbara Mesa Field during the early part of the week and this well was brought in flowing 341 bbls. of exceptionally clean 19.2 gravity oil per day from 2,052 feet. The completion of this well focused the attention of operators on the Santa Barbara Mesa Field because of the possibility that operators in this field up to the present time might have passed up a potentially productive horizon. Because of the relatively large number of wells drilled in this area, it is unlikely that a commercially productive zone has been overlooked. The officials of the La Mesa Oil & Exploration Co. are to be congratulated on their careful drilling and successful completion of No. 1 Ross as this well is commercially productive if the present production can be maintained. This new well will naturally register a normal decline and it is hoped that a normal market will be found for current production.

Dominguez

The Union Oil Co. recompleted two wells on the Hellman lease in the Dominguez Field of Los Angeles Basin during the past week or so and in doing so has temporarily concluded development work in this field. No. 18 Hellman was recompleted flowing 1,510 bbls. of 30.6 gravity oil per day after being plugged back from 4,873 feet to 4,796 feet. No. 16 Hellman, returned to production a few days previously, was brought back on production doing 485 bbls. per day from 5,213 feet. This project was shut in a few days subsequent to completion, however, and will remain off production in the interest of conservation. There were several reconditioning jobs finished in the Long Beach Field during the week, but none of the wells put on production was entirely satisfactory. The Carson Oil Co.'s No. 12, returned to production pumping 94 bbls. from 4,796 feet, was still cutting 20 per cent at last reports. The Richfield Oil Co.'s No. 1 Augustine also showed a rather high water cut upon being recompleted as the output, 148 bbls., showed a cut of 30 per cent. This well, bottomed at 4,745 feet, was plugged back to 4,720 feet, from which depth it was put on the bean. In the Huntington Beach Field The Texas Company recompleted No. 1 on Plavan lease No. 2 pumping 251 bbls. per day from 4,360 feet.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	Unsurveyed	1,812	hd. sd. drilling
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	5,331	plug 4,250 ft.
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	10,294	fishing
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,979	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	3,030	br. sh. drilling
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	5,510	redrilling
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
The Texas Company, No. 1 Carpinteria, Santa Barbara Co.	33- 4-25	4,210	suspended
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	3,115	sd. sh. drilling
Miller, J. W., No. 1 Miguelito, Ventura Co.	23- 3-24	....	grading
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	....	material
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	1,020	redrilling
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,812	suspended
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	1,904	hd. sd. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	plug 2,800 ft.
Milham Expl. Co., No. 16 Buttonwillow, Kern Co.	7-28-23	2,540	15,000,000 ft.gas
Milham Expl. Co., No. 17 Buttonwillow, Kern Co.	17-28-23	rig	rigging up
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,610	br. sh. drilling
Welport Oil Co., No. 8 McKittrick, Kern Co.	26-29-21	1,298	pump 75 B./D.
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	350	cleaning out
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Grande, No. 1 Shale Hills, Kern Co.	7-27-19	3,181	to abandon
Rio Cal Pet., No. 1 Shale Hills, Kern Co.	2-27-18	2,355	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	hd. sd. drilling
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	1,541	sd. sh. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,003	sd. sh. drilling
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	3,147	hd. sd. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,693	redrilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	1,650	fishing
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Martin, J. D., No. 2 Edna, San Luis Obispo Co.	5-31-13	311	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,340	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	569	suspended
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Lacal Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	32-22-20	341	recemented
Kettleman Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	212	sd. drilling
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	rig	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,302	sd. sh. drilling
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,694	fishing
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Mid-California Oil Co., No. 1 Avenal, Kings Co.	11-23-16	....	grade
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	483	suspended
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	2,207	suspended
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,034	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,775	sd. sh. drilling
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,594	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	3,045	suspended
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,130	suspended

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	3,614	sd. sh. drilling
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	4,325	suspended
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,318	wet
Pacific Western, No. 16 Inglewood, Los Angeles Co.	8- 2-14	2,474	sd. sh. drilling
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,860	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, A. W., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Wardell & Menichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	304	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,604	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	2,270	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Abbot, Frank, No. 1 Capistrano, Orange Co.	6- 8- 7	rig	suspended
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	3,740	sd. sh. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	670	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	764	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	29-16- 4	2,677	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-15- 3	446	suspended

Eastern Fields

(Continued from Page 117)

ing, all previously reported, covering Smithfield, Spencer and Curtis districts. In Wirt County, a new test is that of the Rock Run Oil Co. on the J. H. Leep and others farm in Clay district which has reached 750 feet. In Wayne County, but one well is drilling and at present it is shut down. It is the test of the Southern West Virginia Gas Co. on the A. W. Preston farm in Union district and standing at 618 feet.

In Marion County, Monroe and Laughlin have reached 2,525 feet in a second test on the D. V. Liming farm in Mannington district. The Big Injun was struck at 2,510 feet. In Marshall County no wells are now drilling. In Monongalia County the Pennsylvania Counties Gas Co. has resumed drilling and is now at 2,200 feet in its test on the J. L. Jamison farm in Grant district.

SOUTHWEST PENNSYI VANIA

Two fair gas wells were completed in Southwest Pennsylvania during the week, both in Washington County. In Amwell Township, the Philadelphia Gas Co. completed a test on the John Kelsey farm in the 30-foot sand after drilling to the Fifth sand at a depth of 2,700 feet. It is a fair gas well starting off at about 750,000 feet a day. In South Franklin Township, the Iams Oil & Gas Co. completed its No. 3 on its own property at a depth of 2,800 feet and in the Fifth sand. It is also a fair gas well and gauges at about the same volume.

In Amwell Township, where the Pennsylvania fields were excited at the fair test on the Mary B. Linley farm owned by the Union Gasoline & Oil Corp., Raymond Orrill & Co. have started building a rig for a second test on the G. L. Walker farm, their No. 1 being a fair producer. This vicinity will probably be fairly active in the future.

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Stanolind Expresses Views on Crude Price

The following statement was made by R. S. Ellison, president of Stanolind Crude Oil Purchasing Co., Mid-Continent subsidiary of the Standard Oil Co. (Indiana), in regard to crude oil prices:

"In fairness to all concerned it seems desirable to express doubt regarding the dependability of the prediction which has been made by some public officials and newspapers that crude oil prices will be increased 25 cents a barrel if efforts to reduce domestic production to 2,000,000 bbls. a day succeed.

"Viewing the outlook from the standpoint of a large purchaser, reduction of production is only one of several developments which would be necessary to justify a crude advance.

"The demand for crude from the refineries has decreased very substantially in 1932. It is considerably smaller than for the corresponding period last year. The demand for finished products shows a decrease this year, whereas it was increasing last year. And the decrease in consumption has recently become much more pronounced than earlier in the year.

"On account of this condition the problem is not so much one of reducing crude supply to support a higher price as it is one of shutting back fast enough to keep pace with declining consumption and so support the existing price.

"Crude oil is valuable only as raw material for making gasoline and other finished products. Refiners can pay for it only in proportion to what they receive for their finished products. So long as there is sufficient distress gasoline in the market to cause hundreds of local competitive struggles where prices remain below normal it is hardly likely that large purchasers will be in position to pay a higher price for crude merely because the amount offered has been reduced by a few per cent. Changes in crude oil prices are not accomplished so simply as that.

"Naturally, I do not want to discourage efforts to curtail the supply of crude, but before the fallacious idea spreads further that reduction of crude supply will bring about a price increase, I think it desirable to say that Stanolind Crude Oil Purchasing Co. will have to see favorable developments in the stabilization of the price of finished products before it will feel justified in offering a higher crude price. It would be unfair to producers to allow the prospect of higher prices to go unquestioned.

"With consumption slipping as it is, and with the refineries overstocked with gasoline and still running too much, I believe the industry will be very fortunate if it can adjust crude output fast enough to hold present prices. Reduction of refinery runs and establishment of normal conditions in marketing are essential before producers can hope to gain additional benefits from the good work they are doing in limiting crude output."

TWO MILLIONS DAILY TAX

American motorists are now paying nearly $2,000,000 daily in gasoline taxes alone, according to an estimate yesterday by J. Mack Young, a vice president of the New York Automobile Club. The figure is based on calculations that the total collection in motor fuel levies—Federal, state, and municipal—will surpass $725,000,000 for the next 12 months.

Feargus B. Squire, Pioneer, Dies in Cleveland Home

CLEVELAND, Ohio, July 23.—Death claimed another of Cleveland's oil pioneers when Feargus Bowden Squire, 82, who retired in 1909 as vice president of the Standard Oil Co. of Ohio, died at his residence, Cleveland Heights.

Born in England in 1850, Mr. Squire came to Cleveland in 1860. Five years later he began his business career as an office boy with the oil firm of Alexander Schofield & Co. When that company sold out to Standard in 1872 Mr. Squire and John Teagle began jobbing oil as Squire & Teagle and in 1873 they built their first refinery.

W. C. Schofield was taken into the firm, which became Schofield, Squire & Teagle. A year later Mr. Squire's interest was sold to Dan Shurmer, and he established another refinery which was conducted under the name of Newman, Squire & Co.

This refinery was transferred in June, 1876, to the Standard Oil Co., at which time Mr. Squire became identified with Standard. He served the Standard interests in Weehauken, N. J.; Baltimore and New York, returning to Cleveland in 1885 as co-manager of the company with Frank Rockefeller. Upon retirement of the latter Mr. Squire was manager and vice president of the company until his retirement in 1909.

He has been credited with building the first tank wagon (1892) and with being the first to ship refined oil by tank car. John D. Rockefeller tried to discourage Mr. Squire in this latter venture, fearing that tank car rust would spoil the oil, but Mr. Squire proved his point by shipping 10 cars of 100 bbls. each from Petroleum Center, Pa., to Detroit.

Following his retirement Mr. Squire made two trips around the world.

Oklahoma Fields

(Continued from Page 106)

and others' No. 1 McPhail, SW cor. Section 14-2s-7w, is a location. Pace's No. 2 Bristow, NW cor. NE SE SE Section 18-2s-7w, was abandoned at 1,927 feet. Pace and others' No. 4 Dilly, SW cor. NW NW SW Section 22-2s-7w, is a rig. Same operators' No. 1 A. Watkins, NW cor. SE SW Section 22-2s-7w, is a rig.

Tulsa County

Murray & Son's No. 2 McIntosh, CSL SW SE Section 17-19-14, is a location. Murray and others' No. 1 Brown, NW cor. SE Section 21-19-14, was abandoned at 1,350 feet. H. W. Bouder and others' No. 4 Perryman, NW cor. NE NW Section 4-17-14, made 10 bbls. after an 80-quart shot at 1,492-1,551 feet.

Wagoner County

C. Lambert's No. 1 McIntosh, CEL SE SE Section 22-18-15, is a machine. J. K. Oil Co.'s No. 1 Anderson, NE cor. SW Section 19-17-17, was drilling at 100 feet. Le Piere's No. 1 Morgan, SE cor. Section 14-18-15, was drilling at 994 feet. Sheridan Oil Co.'s No. 3 Snake, C SE NW Section 26-18-15, was drilling at 550 feet. J. E. Martin's No. 2 Drew, CEL NE SW Section 26-18-15, made 30 bbls. of oil after 50-quart shot at 1,015-33 feet. Hartman's No. 2 Sarty, SE cor. NW Section 7-17-16, was abandoned at 985 feet. Brown Petroleum Co.'s No. 1 Charles, SW cor. NE NE Section 33-17-16, was abandoned at 910 feet. Braman Oil Co.'s No. 1 Gregory, SE cor. NE NW Section 19-17-17, was abandoned at 1,300 feet.

Gulf Coast Fields and Wildcats

(Continued from Page 112)

Sun Oil Co.'s No. 3 Higgins, Wm. Hodges Sur., 50 ft. from E line of tr. and direct offset McAlbert Oil Co.'s No. 2-B Higgins ..... Salt 1,651 ft.; top of salt 1,470 ft.; drill pipe stuck; set whipstock 1,027 ft.; drlg. rock 1,115 ft.

The Texas Company's No. 6 Wilburn (D.D.), Henry Griffith League ..... Sand 4,451-63 ft.; comp. pumping 100 bbls. net oil.

Texas Gulf Prod. Co.'s No. 2 Cornelia Barber, Henry Griffith League, 514 ft. W, 41.5 ft. S of NE cor. of tr. ..... Sand showing oil 4,285-4,309 ft.; to set csg.

Texas Gulf Prod. Co.'s No. 3-C Kirby, 562 ft. from W line, 50 ft. from S line of "C" lease ..... Rig.

Texas Gulf Prod. Co.'s No. 10-H Kirby, Henry Griffith League, 30 ft. W of No. 3 Ilfrey ..... Drlg. salt 1,820 ft.; top of salt 1,396 ft.

Texas Gulf Prod. Co.'s No. 11-H Kirby, Henry Griffith League, 150 ft. W of No. 10-H ..... Drlg. rock 1,321 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 23 Moore, Mark Smith Sur., 560 ft. N and 560 ft. W of No. 31 ..... Drlg. shale 2,985 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3-A T. I. Booth, Samuel Kennedy Sur., 445 ft. N of S line, E of No. 2-A (junked hole) ..... Rig.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 2 Davis, Robt. Peebles Sur., 2,483 ft. E, 150 ft. S of NW cor. of 1,000-ac. tr. ..... Sand showing oil 5,286 ft.; cmtd. csg.

Humble O. & R. Co. and **Gulf Prod. Co.'s No.** 4 Lockwood, J. Rabb Sur., 3,000 ft. E and 330 ft. N of SW cor. of tract ..... Blew out 4,520 ft.; cratered and caught fire.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. E. 300 ft. N of SW cor. of Tr. 3 ..... Sandy shale showing oil 5,092 ft.; cmtd. 7-in. csg.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 6-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 330 ft. from N line of 469-acre tract ..... Drlg. shale 4,939 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 3-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 300 ft. from N line of Tr. 1 (938.75 ac.).. Drlg. shale and lime 3,744 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 8-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. W, 300 ft. S NE cor. of 369.3-ac. tract ..... Derrick.

The Texas Co.'s No. 1 Wolters (M. H. Gubbels), Samuel Kennedy Sur., 742 ft. from W line, 100 ft. from S line of 100-ac. tract ..... Cored sand showing oil to 5,296 ft.; to set screen.

SOUR LAKE—HARDIN COUNTY

Prudential Oil Co.'s No. 1 Maco Stewart, Stephen Jackson Sur., 1,050 ft. from S line and 150 ft. from W line of 50-acre tract ..... Cmtd. 10-in. csg. 820 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 28 Cade, N. Fitzsimmons Sur., 600 ft. S, 150 ft. E from No. 26 ..... Heaving shale 6,285 ft.

Yount Lee Oil Co.'s No. 29 Cade, N. Fitzsimmons Sur., 300 ft. E of No. 27 and 240 ft. N of No. 16 ..... Sand showing oil 5,244-72 ft.; cmtd. 7-in. csg. 5,242 ft.; drlg. plug.

Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Salt 4,618-27 ft.

Yount Lee Oil Co.'s No. 11 Smith, Martin Dunman Sur., 130 ft. E of No. 3 and 440 ft. N of No. 5 ..... Oil sand 4,598-4,623 ft.; set 1 jt. of 5-in. screen; comp. flowing 1,500 bbls. pipe line oil, 835 lbs., 3/8-in. choke.

Yount Lee Oil Co.'s No. 2 Nellie League, Martin Dunman Sur., 230 ft. N of No. 1 and 300 ft. E ..... Oil sand 4,487-4,521 ft.; set 1 jt. 5-in. screen 1,080 bbls., 700 lbs., 3/8-in. choke.

Yount Lee Oil Co.'s No. 12 Smith, Martin Dunman Sur., 330 ft. W of No. 11 and 100 ft. N of No. 2 ..... Spudded.

Yount Lee Oil Co.'s No. 2 M. M. Spencer, Martin Dunman Sur., center of tract in line with No. 11 Smith and No. 2 Nellie League ..... Spudded.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 86 "J" lease ..... Tested salt water 885 ft.; drlg. deeper.

HUMBLE—HARRIS COUNTY

Burt & Deerings No. 2 C.O.&G.-Texas Co. fee, J. B. Stephenson Sur., 50 ft. E and 50 ft. S of SE cor. of Wheeler & Pickens Blk. 24 in 25-acre tract ..... Spudded.

J. D. Clay's No. 1 Bender, Robert Dunman Sur., 200 ft. from W line and 100 ft. from S line of 100-acre tract ..... Cap rock 1,283-97 ft.; abnd.

Rio Bravo Oil Co.'s No. 1 Westheimer, 965 ft. W and 300 ft. N of SE cor. of Westheimer Subd., John Jones Sur. ..... Spudded.

The Texas Co.'s No. 26 House, Mary Owens Sur., 100 ft. W of No. 20 ..... Sand showing oil 3,482-97 ft.; set 35 ft. of 4½-in. screen; swabbed salt water.

E. M. Wilson's No. 10 W. & P.-Texas fee, 50 ft. E line, 40 ft. from N line of Blk. 23, J. B. Stevenson Sur... Spudded.

E. M. Wilson's No. 1 Wheeler & Pickens, Blk. 21, J. B. Stevenson Sur. ..... Drlg. 225 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 35 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1 ..... Sandy shale showing oil 3,877 ft.; cmtd. 7-in. csg. 3,834 ft.

Moody Corp. and Pure Oil Co.'s No. 1 Herman (W.O.), J. Kopman Sur., 200 ft. due W of C of E line of 25-acre tract ..... Drlg. sticky shale 4,641 ft.

Rio Bravo Oil Co.'s No. 21-A Settegast (D.D.), J. Kopman Sur., 400 ft. S and 200 ft. E of NE cor. "A" lease ..... Pulled screen 4,313 ft.; drlg. deeper.

S. B. Ward's No. 1 Mowery, J. Hamilton Sur. No. 53, 300 ft. from W line, 60 ft. from N line of 24-ac. tr... Drlg. shale 1,460 ft.

Crown-Framer Oil Co.'s No. 1 Sladous (W.O.), Wm. Lovett Sur., 150 ft. from S line, 350 ft. from E line of tract ..... Preparing to work over; T.D. 5,900 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 1 Davis (D.D.), 50 ft. out of SE cor. of David Kokernut Sur. ..... No report.

Cranfill-Reynolds Co.'s No. 1 Moore's Bluff (D.D.), 50 ft. out of NE cor. of M. Duncan ..... No report.

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract ..... No report.

Cranfill & Reynolds' No. 8 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... No report.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line ..... Derrick.

Eclipse Oil Co., No. 2 Barrow, Jesse Devore Sur., 55 ft. W, 35 ft. S of most easterly NE cor. 3.7-ac. tract.... T.D. 4,960 ft.; sand 4,872-4,920 ft.; fishing swab.

Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract ..... Derrick.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Drlg. shale 964 ft.

D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... Sand 4,687 ft.; cmtd. 6⅝-in. csg.

D. & L. Prod. Co.'s No. 3 Mecom & Layton, Jesse DeVore Sur., 80 ft. from S line, 60 ft. from W line of 3-ac. tr. ..... Derrick.

Gulf Coast Development Co.'s (Healey & Southerland) No. 1 Findley, Jesse DeVore Sur., 50 ft. from E line and 100 ft. from N line of 4-ac. tr. ..... Shut down waiting orders 1,935 ft.

Houston Prod. Co's No. 1 Baldwin, Jesse DeVore Sur., 222 ft. from S line and 50 ft. from E line of 5-acre tract ..... Drlg. gumbo 1,755 ft.
Republic Prod. Co.'s No. 146 Dolbear, Jesse DeVore Sur., midway between and in line with Nos. 18 and 86 .. Sand showing oil 2,507 ft.; cmtd. csg.

MARKHAM—MATAGORDA COUNTY

Rycade Oil Corp.'s No. 4 Meyers, 250 ft. from S line and 125 ft. from E line of SW, Blk. 1, William Hadden Sur. ..... Cmtd. 10-in. csg. 1,000 ft.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 3 Stark, 350 ft. E, 100 ft. N of SW cor. of Marshall Beauchamp Sur. ..... Sand showing oil 3,473-89 ft.; set 20 ft. of 7-in. screen; comp. flowing 75 bbls. fluid, 7% b.s. and mud, first hour, ⅝-in. choke.

ORANGE—ORANGE COUNTY

Sun Oil Co.'s No. 1 Bellie (D.D.) ..... No report.

REFUGIO—REFUGIO COUNTY

E. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River ..... T.D. 9,134 ft.; cmtd. 1 string 5¾-in. csg. and 100 ft. screen; drld. plug and flowed fresh water; plugged back 15 ft.
Larco Gas Co.'s No. 5 Strauch, Refugio Town tract, Lot 6, Blk. 2, 100 ft. W of No. 2 ..... Shut down awaiting orders.

CLAY CREEK—WASHINGTON COUNTY

Nicholson Oil Corp.'s No. 1 Bimage, C of E½ of J. F. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-ac. tract ..... No report.
John Walker et al's No. 1 Henry Wendt, J. F. Perry Sur., 150 ft. from SW line and 405 ft. from SE line of tract ..... No report.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Ratliff, Seiss & McLean's No. 2 Crusel (W.O.), 50 ft. S and 50 ft. W of NE cor. of Sec. 42-9s-2w ..... Set screen 1,678 ft.; comp. 40 bbls. net oil, 150 bbls. water.
Reliable Oil Co.'s No. 1 Haber, 50 ft. N and 50 ft. W of SE cor., Lot 4, Blk. 12, Sec. 46-9S-2w ..... Sand and shale 1,909-27 ft.; pumped S.W.; shut down.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 12-9s-7w ..... Drlg. gumbo 4,992 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Liliard (W.O.) ..... T.D. 2,530 ft.; S.D.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 9 Bordages (W.O.), 319 ft. N and 90 ft. E of SW cor. of NW NE Sec. 8-10s-9w ... Drlg. shale 6,776 ft.
Magnolia Pet. Co.'s No. 4 Frieberg & Wolf (W.O.) ..... Sandy shale showing oil 3,392 ft.; cmtd. csg.
Union Sulphur Co.'s No. 3 Martha Moss, 300 ft. W, 150 ft. S, NE cor. NW SE, Sec. 8-10s-9w ..... Tested S.W. 5,300 ft.; pulling screen to deepen.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 750 fee (D.D.), Sec. 29-9s-10w .... Pulling screen to deepen 3,353 ft.
Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w ..... Salt 6,053 ft.; sidetracked 3,242 ft. and coring oil sand 4,979 ft.
Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w ..... Location.
Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w ..... Location.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3 ..... Drlg. gumbo 1,620 ft.
Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W, 362 ft. N, SE cor. SW NE, Sec. 33-10s-12w ..... Fishing drill pipe 3,667 ft.

HACKBERRY—CAMERON PARISH

Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Rig.
Moon Oil Co.'s (R. E. Seiss') No. 1 Breaux, 1,300 ft. N, 150 ft. E of NW cor. of 61-ac. tr., Blk. 26, Sec. 46-12s-10w ..... Sand 4,246-49 ft.
Moon Oil Co.'s No. 6 Sanner, 1,550 ft. N and 675 ft. E of SW cor. of Sec. 28-12s-10w ..... Derrick.
Pop Oil Co.'s No. 1 Ellender, 617 ft. N and 931 ft. W of SE cor. NE, Sec. 19-12s-10w ..... Drlg. 1,820 ft.
J. D. Sutton's No. 7 Irwin, 1,820 ft. N and 1,490 ft. W of SE cor. of Sec. 13-12s-10w ..... Drlg. crystallized lime 3,256 ft.; cmtd. csg.
The Texas Co.'s No. 9 State, 2,229 ft. N, 918 ft. E from SE cor. Sec. 13-12s-10w, in 12s-9w ..... Drlg. rock 3,560 ft.
The Texas Co.'s No. 10 State, 2,375 ft. N, 564 ft. E, SE cor. Sec. 13-12s-10w, in Twp. 12s-9w ..... Location.
Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,958 ft. N, 400 ft. W of SE cor., Sec. 11-12s-10w ..... Sand showing oil 8,316-24 ft.; fishing drill pipe.
Yount Lee Oil Co.'s No. 11 School land, 2,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w ..... Sand showing oil 3,795 ft.; cmtd. 7-in. csg. 3,785 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 2 Wilson & Cockran, Sec. 4-6s-5e, 600 ft. N of No. 1 ..... Spudded.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 21 United Land Co., 3,088 ft. E and 690 ft. N of SW cor. of Sec. 15-10s-4e ..... Drlg. rock 1,675 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Location.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 5 L.L.&E., 3,888 ft. S, 105 ft. E of NW cor. of Sec. 26-21s-22e ..... Oil sand 3,653-63 ft.; cmtd. 7-in. csg.; drld. plug and set screen.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... Shut down 2,385 ft.
O'Hara Oil & Gas Co.'s No. 1 Neilius, J. C. Cummings Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek ..... Derrick.

BRAZORIA COUNTY

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Drlg. sand and shale 3,676 ft.
J. R. Ingram's No. 2 Levitt, John Peske Sur., 75 ft. NW of No. 1 ..... Standing 2,185 ft.
Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Rig.
The Texas Company's No. 3 Belcher, Manvel, Harvey N. Little Sur., 1,220 ft. southwesterly and 200 ft. southeasterly out of N cor. of Belcher lease ..... Drlg. gumbo 1,570 ft.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... Shut down 650 ft.
E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... Drlg. 1,310 ft.
Marek & Son's No. 3 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract ..... Standing 2,210 ft.
Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 8, P. Singleton Sur. ..... Shut down 2,648 ft.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

COLORADO COUNTY

Bunte and Shell Pet. Corp.'s No. 1 Rudolph Matuska, Joshua Kenneke Sur., 700 ft. S of most northerly NW cor. in C E and W of 130-acre tract ..... Derrick.
Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Sur., Sec. 43 ..... Set 26 ft. of 7-in. screen on full string 7-in. csg. 4,052 ft.; comp. estm. 50,000,000 ft. dry gas; 1,500 lbs. on csg. and 1,450 lbs. on tubing; ¼-in. choke; shut in.
Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur. ... Drlg. shale 3,912 ft.

FORT BEND COUNTY

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... Drlg. 4,006 ft.
Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line, 1,892 ft. from NE line ..... No report.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 10, Sarah White Sur. .... Location.
H. H. Stevenson's No. 1 Lobit, J. F. Perry and E. M. Austin Sur., 250 ft. N of Dickinson Bayou, and 250 ft. W of E line of E. Lobit 23-ac. tr. ..... Shut down 600 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... No report.

HARDIN COUNTY

W. R. Alexander et al's No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur.. Drlg. gumbo 625 ft.
Houston Oil Co. and Republic Prod. Co.'s No. 1 Ariola fee, 3,660 ft. from N line and 9,700 ft. from E line of Ariola Sur. ..... Cmtd. 12½-in. csg. 756 ft.
Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. ..... Drlg. gumbo 1,972 ft.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... D.S. stuck 547 ft; standing.
John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. Drlg. gumbo 1,662 ft.
H. D. Morse et al's No. 1 Schlveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Drlg. gumbo 3,014 ft.
Victor Smith's No. 1 Dr. Griffith, S. Bell Sur., 582 ft. from E line and 60 ft. from N line of 250-acre tract.. Derrick.
Suma Oil Co.'s (Lucket et al's) No. 1 Wilson & Hunt, Wm. Ritchie Sur., 200 ft. from S line and 500 ft. from W line of 50-acre tract ..... Abnd 1,820 ft.

JASPER COUNTY

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... Shut down 4,521 ft.
Rio Neches Oil Co.'s No. 4-A Boykin, M. Rackle Sur., 400 ft. E of No. 3-A ..... Spudded.

JEFFERSON COUNTY

Coast Oil & Gas Co.'s No. 1 Young, Joseph Grigsby Sur., 250 ft. from E line and 160 ft. from S line of 40-acre tract in Block F-5, Lot 6 ..... Rig.
Elam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,855 ft.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Drlg. sand and shale 1,322 ft.
Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... Rig.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... T.D. 2,720 ft.; reaming to set csg.
Shepherd's Mott Salt Dome Oil Co.'s No. 1 Hawkins, Shepherd's Mott, 5,268 ft. from N line and 1,320 ft. from E line of B. McCarthy Sur. ..... Drlg. sandy shale 3,729 ft.
United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... T.D. 7,838 ft.; sidetracking 7,693 ft.

MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 South Tex. Dev. Co., center of Blk. 47, in southeast Alex McCown Sur. ..... Sand showing oil 5,125-57 ft.; setting csg. to test.
Craft & Gesieke's No. 2 South Tex. Dev. Co., center T.&N.O. Sur., Blk. 5 ..... Location.
Craft & Gesieke's No. 1 South Tex. Dev. Co., T.&N.O. Sur., Blk. 9 ..... Shut down 4,996 ft.
Gohlson Bros. and Rycade Oil Corp.'s No. 1 Drought, 2,340 ft. along N line of Kronkrite Sur., from NE cor., thence 250 ft. S at right angles ..... Shut down waiting orders 4,002 ft.
Hamilton et al's No. 1 Gilbert, John Davis Sur., 256 ft. from W line and 465 ft. from S line of 46-acre tract.. Spudded.
Heep Oil Corp.'s No. 1 Brent, D. W. Collins Sur., 330 ft. from S line in center east and west of 209-ac. tr.. Dry shale 5,182 ft.; to plug back.
Heep Oil Corp.'s No. 1 Cartwright (D.D.), 2,861.6 ft. southerly along W line of John O. Davis Sur. from NE cor. and thence 450 ft. E ..... Sand 5,165-86 ft.; 43 ft. of 5-in. screen set on full string 5-in. csg.; comp. flowing 63 bbls. pipe line oil hourly; 775 lbs. pressure; ⅝-in. choke.
Heep Oil Corp.'s No. 2 Cartwright Sur., John Davis Sur., 330 ft. from S line, 400 ft. from E line of tr... Drlg. shale 4,668 ft.
Houston Oil Co.'s No. 1 Hamman, Charles B. Stewart Sur., 450 ft. from N and W line of 232.5-ac. tr. .... Sand showing oil 5,129 ft.; cmtd. 7-in. csg. 5,099 ft.
Humble Oil & Ref. Co.'s No. 1 C. L. Dobbins, Ransom House Sur., 425 ft. from N line and 466 ft. from W line of tract ..... Sand showing oil and gas 1,740-80 ft.; tried to blow out; drilling deeper.
Humble Oil & Ref. Co.'s No. 4 South Tex. Dev. Co., 1,900 ft. N from SE cor. of T. C. Howell Sur., thence 466 ft. W at right angles ..... Drlg. shale and lime 1,294 ft.
Humble Oil & Ref. Co.'s No. 1 Cartwright, John Davis Sur., 330 ft. from N line, 466 ft. from E line of 248.9-ac. tract ..... Spudded.
Lilly and Red Moon Oil Co.'s No. 1 Stella McDonald, John Davis Sur., 241½ ft. from E line, 202.8 ft. from S line of 5-ac. tract ..... Rig.
Lowrie & Young's No. 1 C. A. Damuth, approx. 5,430 ft. from E line and 3,018 ft. from S line of T. J. Nichols Sur. ..... Derrick.
Miller Prod. Co.'s No. 1 Foster Lbr. Co., M. B. Lawrence Sur., 2,640 ft. from N line and 300 ft. from E line of 412-acre tract ..... Location.
Moore et al's No. 1 Burton, I.&G.N. Sur., 466 ft. out of NE cor. 46-acre tract ..... Drlg. gumbo 960 ft.
Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,226 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.
Plummer & McDaniel's No. 1 South Tex. Dev. Co., Theo. Slade Sur., 330 ft. from S and E lines of 60-ac. lease, in Lot 103 ..... Drlg. shale 4,701 ft.
Rowe & Flowers' No. 1 Varner, R. House Sur., 330 ft. out of NE cor. of 33-ac. tr. ..... Coring shale 4,712 ft.

Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... Drlg. shale 4,971 ft.
C. C. Steinberger et al's No. 1 Steinberger, John Davis Sur., 450 ft. from N and W lines of the 250-ac. tract.. T.D. 2,359 ft.; plugged to 1,000 ft. to straighten hole; drlg. cmt. 2,285 ft.
Strake Oil Corp.'s No. 3 South Tex. Dev. Co., 2,475 ft. from W line and 790 ft. from S line of Theo. Slade Sur. ..... Drlg. shale 4,987 ft.
R. H. Vice's No. 1 S. L. Ross, Jose Maria De La Garza Sur., 1,777 ft. N and 344 ft. E of SW cor. 97-acre tract ..... Derrick.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... Drlg. shale 420 ft.
Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Rig.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Set 10-ft. blank and 15 ft. of 4½-in. screen 4,808 ft.; tested salt water; shut down.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... No report.
Coch & Stevens' No. 1 Ruth Lawrence, Castillian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... No report.
W. H. Freeman's No. 2 Freeman, A. Viesca Sur. ..... Washing to bottom 3,160 ft.; to deepen.
Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Spudded.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 1 J. O'Connor, C.E.P.I.&M. Sur., 1,200 ft. from S line and 1,500 varas from E line of tract ..... Drlg. shale 3,946 ft.
Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Sand 5,834-41 ft.; to make drill stem test.
Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 8,158 ft. W of E line at right angles ..... Shut down 5,748 ft.

TRINITY COUNTY

C. N. Beckner's No. 1 Mangum, J. A. Henderson Sur., 200 ft. out of NE cor. 80-acre tract ..... Drlg. sand and shale 1,229 ft.
Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of I.&G.N. Sur., No. 47 ..... S.D. 3,556 ft.

VICTORIA COUNTY

Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 200 ft. E of No. 1 ..... D.S. test 5,690-95 ft.; showed S.W.
Cullen & West's No. 1 Keeran ranch, Martin DeLeon Sur., 450 ft. from S line, 450 ft. from W line of tr. .. Drlg. shale 6,147 ft.
Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... T.D. 5,292 ft.; straightening hole 3,478 ft.
Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Drlg. sand 2,682 ft.
The Texas Company's No. 4 McFaddin, 86 deg. E. 1,728½ ft. from NE cor. of Andrew J. Gray Sur. in John M. Rine Sur. ..... T.D. 2,840 ft.; junked and abnd.
Union Oil Co.'s No. 1 Keeran, 4,166 ft. SW along SE line of Gulf Prod. Co.'s 2,500-ac. lease from most easterly cor., thence 1,390 ft. SE at right angles in Martin DeLeon Sur. ..... Drlg. shale 4,861 ft.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Shut down 2,011 ft.
Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down 2,090 ft.
Geo. F. Kerr's No. 1 Smithers Bros., S. Manning Sur..... Shut down 2,240 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.
Seven Wells Oil Corp.'s No. 1 Maxwell, Justo Liendo Sur., 225 ft. from N line and 492 ft. from W line of 86-acre tract ..... Location.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract ..... Derrick.

SOUTH LOUISIANA

ASCENSION PARISH

Rio Bravo Oil Co.'s No. 1 Community Lease, Darrow, 200 ft. from N line and 1,500 ft. E at right angles from SW cor. of Sec. 15-10s-2e ..... Sand and gravel 1,500 ft.; shut down to repair derrick.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-2s-9w ..... Sand 1,120 ft.; cmtd. 6⅝-in. csg.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w.. Sand showing oil 6,619-22 ft.; cmtd. 6⅝-in. csg.; twisted off drill stem.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 260 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-2e ..... Shut down 1,420 ft.

IBERVILLE PARISH

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw, 2,040 ft. N and 600 ft. W of C of Sec. 52-9s-11e ..... Salt 4,203-5,220 ft.; abnd.

JEFFERSON DAVIS PARISH

D. C. Gillette's No. 1 J. A. Jester, 2,487 ft. S and 1,800 ft. W of NE cor. of Sec. 27-8s-3w ..... Drlg. 1,910 ft.
Little City Oil Co.'s No. 1 Jennings Norwood, 1,975 ft. N and 675 ft. E of SW cor. of Sec. 44-9s-3w ..... Drlg. 1,536 ft.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 2 Cockrell-Moran, Sec. 14-20-26e, 1,218 ft. N and 4,396 ft. E of station ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 1 Louisiana State, 598 ft. N and 1,229 ft. E of station ..... Sulphur test.

POINTE COUPEE PARISH

Grand Bay Oil & Gas Co.'s No. 1 Moniotte, 10,140 ft. S and 13,450 ft. E of NW cor. Twp. 5s-11 in Sec. 34.... Shut down 310 ft.

TERREBONNE PARISH

The Texas Company's No. 7 State-Lake Pelto, 2,216 ft. N, 104 ft. W of SE cor., Sec. 8-23s-18e ..... Derrick.
The Texas Co.'s No. 16 State-Lake Barre, 1,500 ft. S, 150 ft. E of NW cor., Sec. 30-21s-19e ..... Drlg. 200 ft.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Mulvey Irrigation (Gueydan), 1,170.9 ft. from N line and 2,252.5 ft. from W line of Sec. 34-11s-1w ..... Drlg. shale, lime and boulders 3,064 ft.

VERNON PARISH

Minerals Division Llano Co.'s No. 1 Llano Del Rio, 542 ft. E and 300 ft. S of NW cor. of Sec. 34-3n-9w ..... Drlg. shale 1,250 ft.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 51-1s-14w... Shut down 2,449 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 114)

M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur. ..... T.D. 1,412 ft.; drlg.

DE WITT COUNTY

J. F. Richardson's No. 1 Virginia Taylor, 330 ft. from SE line of tract, 330 ft. NE of Minnehuila Creek... T.D. 2,415 ft; drlg.
The Texas Co.'s No. 1 John McCrabb, 4,000 ft from SW line, 1,435 ft. from SE line of 794-ac. lease in James Quinn Sur. ..... T.D. 5,309 ft.; abnd.

DUVAL COUNTY

Buchanan & Frates' No. 1 Hagist, cen. of SW Sur. 267.. Derrick.
Delange & Frates' No. 1 Sevier, 1,845 ft. from N line, 2,945 ft. from W line of Sur. No. 213 (Driscoll ranch) ..... Location.
Frank Gravis' No. 3 Schaliert in Sur. 255 (Palangano salt dome) ..... T.D. 953 ft.; drlg.
Clark & Cowden's No. 1 Sutherland, 450 ft. from W line, 150 ft. from S line of Sur. No. 3 ..... T.D. 2,395 ft.; drlg.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 ..... T.D. 2,725 ft.; standing.
Payne & Vernon's No. 1 A. Roach, 865 ft. from E line 45 ft. from S line of Blk. 7, Survey No. 457 ..... Derrick.
Plymouth Oil Co.'s No. 1 Parr, 6,250 ft. from W line, 1,925 ft. from S line of San Andres, Garcia grant ... T.D. 4,482 ft.; drlg.

GUADALUPE COUNTY

John F. Camp's No. 1 Delaney, 2,572 ft. from S line, 1,515 ft. from W line of Delaney 400-acre tract in Jesus Cantu Sur. ..... T.D. 2,257 ft.; drlg.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.
Humble Oil & Ref. Co.'s No. 1 Fromme, 450 ft. from S line, 150 ft. from W line of lease on Geo. Kersey Sur.. T.D. 5,162 ft.; drlg.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... T.D. 5,137 ft.; fishing.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. ..... T.D. 5,070 ft.; to drill deeper.

GONZALES COUNTY

Crowder Oil Co.'s No. 1 Preston, 1,000 ft. from W line, 2,000 ft. from N line of W. W. Pace Sur. ..... T.D. 200 ft.; dropped till work starts.
Edmiston & Kirby Petroleum Co.'s No. 1 J. W. Ward, Jr., 200 ft. from N and W lines of tract in Dan McKay Sur. ..... T.D. 1,529 ft.; dropped till work starts.
Johnson & Mattock's No. 1 J. James, 12 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... T.D. 3,200 ft.; pulled in derrick.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft.; shut down.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 675 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
D. C. DeWitt's No. 1 Gomez, 1,1.0 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county .. T.D. 1,457 ft.; to drill deeper.
Randado Syndicate's No. 1 Randado townsite, Sur. No. 148 ..... T.D. 2,503 ft.; standing.

JIM WELLS COUNTY

Catlett & O'Neal's No. 2 H. D. Miller, 2,200 ft. N and 83 deg. E of most southwesterly cor. of ranch ..... Location.
F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Rebuilding derrick.
Mid-States Oil & Gas Co.'s No. 1 Wade, C Blk. 3, Wade ranch, NE part of county ..... Location.
S. J. Sloane's No. 1 W. Wade, 150 ft. SW of cen. of NE line of Lot 6, Blk. C of Wade ranch, C. Blanca Sur... T.D. 3,215 ft.; abnd.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 2,014 ft.; drlg.
Ike Howeth et al's No. 1 D. Pargmann in Victor Blanco Sur., 660 ft. NE along county road from NE cor. of F. Heer tract, thence 50 ft. NW at right angles... Set surface csg.
Nichols Oil Co.'s No. 1 Newberry, 210 ft. S. 60 de. E from Fort Bend Oil Co.'s No. 1 Newberry ..... T.D. 3,300 ft.; S.D.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur..... T.D. 3,422 ft.; no report.

KERR COUNTY

Eastland Oil Co.'s No. 1 Love, 600 ft. E of No. 1 Love in J. Martinez Sur. No. 1,594 ..... T.D. 1,900 ft.; S.D. for fuel.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28.... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,220 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T.D. 110 ft.; standing.

LIVE OAK COUNTY

J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 592 ft.; S.D. for water.

LEE COUNTY

Paton Bros.' No. 1-A Turner, 24 ft. from No. 1 Turner... T.D. 5,022 ft.; drlg.

MEDINA COUNTY

James Earle Greenlee's No. 1 J. P. Nixon 150 ft. S of C of N line of S half of NW of M. Derungs Sur. No. 528 ..... Spudded in
Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of E. B. Rutledge Sur., southern part of county ..... T.D. 2,100 ft.; drlg.

MILAM COUNTY

M. W. Elser's No. 1 Citizen's Nat. Bank of Waco, 1,325 ft. from S line, 625 ft. from E and W lines of tract in Wm. Punchard Sur. ..... Moving in rig.
Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-acre tract in Samuel Frost Sur.... T.D. 550 ft.; drlg.
Keyser & Nichols' No. 2 Irwin, 65 ft. from No. 1, Levi Taylor Sur. ..... Set csg. 590 ft.; S.D.
Keyser & Roberts' No. 3 Ward, 125 ft. NE of No. 2 Ward, in Levi Taylor Sur. ..... T.D. 1,315 ft.; S.D.
Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. ... T.D. 1,952 ft.; drlg.

SAN PATRICIO COUNTY

John F. Camp's No. 1 W. W. Bennett, C SW of Sec. 8, Geo. H. Paul Subd., J. J. Welder ranch ..... T.D. 3,581 ft.; drlg.

STARR COUNTY

Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 800 ft.; set csg.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Spudded in and S.D.
H. C. Carter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction Mier ..... T.D. 340 ft.; standing
Frank LaBorde's No. 1 Juan Marroquin, 1,250 ft. from E line, 1,225 ft. from S line of Share 21 of W two-thirds of Porcion 75 ..... T.D. 620 ft.; standing
Lackawanna Oil Corp.'s No. 1 V. Guerra, 657 ft. from NE line, 763 ft. from SE line of Blk. 12, Subd. of 2,000-acre tract out of Porciones 55 and 56 ..... Location.
Sinclair & Rutherford's No. 1 J. T. Canales, 150 ft. from S and W lines of Share 69 of W half of Porcion 79, Camargo ..... Abnd.

Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 80, Jurisdiction Camargo ..... T.D. 190 ft.; standing.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 230 ft.; set surface csg.
Stryalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 80, Share 38 .... T.D. 2,384 ft.; drlg.
Stryala Oil Corp.'s No. 1 H. Garza, 500 ft. from E line, 5,280 ft. from N line of Share 26, Partition of Porcions 67-72 ..... Location.
Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 10, 150 ft. from N and E lines of Share 19-A ..... T.D. 360 ft.; standing
Stryalls No. Corp.'s No. 1 Margo, 150 ft. from N and E lines of Share 27 of Subd. of Porciones 80 and 81, Jurisdiction of Camargo ..... T.D. 210 ft.; standing.
E. L. Williams' No. 1 L. G. Madrigal, 150 ft. from N and W lines of Share 5-A of Porcion 72 of Jurisdiction of Mier ..... T.D. 332 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. ..... T.D. 1,210 ft.; abnd.
Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 1,598 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... T.D. 550 ft.; fishing.

WEBB COUNTY

Blair & Livingston's No. 1 J. M. Garcia, 150 ft. from N and E lines of NE NW of Sur. 1,100 ..... Location.
O. W. Killam's No. 1 Smith, 664 ft. from NW line, 680 ft. from NE line of Blk. 6, Sur. 1,110 ..... T.D. 1,000 ft.; drlg.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... Set surface csg.
Norden & Morris' No. 2 Gates, 340 ft. from W line, 400 ft. from S line of Blk. 5, Sur. No. 19 ..... T.D. 485 ft.; drlg.
Thompkins et al's No. 1 Ortiz, 200 ft. from E line, 2,000 ft. from N line of Sur. No. 1,808 ..... T.D. 930 ft.; standing.

WILLIAMSON COUNTY

Burns et al's No. 1 E. G. Edge, 360 ft. from SE line, 267 ft. from SW line of 94-acre tract on Simon Miller Sur. ..... T.D. 850 ft.; drlg.
McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. ..... T.D. 740 ft.; S.D.
McNeill & Matthews' No. 1 Bachmayer, 300 ft. from E line, 150 ft. from S line of C. C. Browning Sur. ... T.D. 2,000 ft.; standing.

WILSON COUNTY

A. M. Blume's No. 1-A Nicholson, 105 ft. N, 27 deg. E of No. 1 Johnson ..... Moving in rig.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,505 ft.; standing.
Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... T.D. 1,495 ft.; drlg.
Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700 ac. of Share A, Charco Redondo grant ..... T.D. 310 ft.; drlg.
Hunt & Polk's No. 1 H. Ramirez, 7,075 ft. N of S cor. and 2,918 ft. from W line of Share A of Villa grant.. T.D. 820 ft.; standing
T. J. Murray's No. 2 Haynes, 3,000 ft. from NE line, 7,091 ft. from NW line of Haynes Pasture, Comitas grant ..... T.D. 1,373 ft.; drlg.
F. J. Ossenbeck's No. 1 Adelfonso Ramoriz, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ..... Location.
H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 922 ft from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ..... T.D. 920 ft.; drlg.
F. J. Searight's No. 1 F. Munoz, 660 ft. from N line and on line between Blocks 81 and 82 of Porcion 18 ..... Set surface csg.

Southwest Texas Proven Areas

Week Ending July 23

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... Moving in.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tr. in A. Manachaca Sur. 51.. T.D. 1,216 ft.; drlg.
E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montez Sur. ..... T.D. 482 ft.; waiting for rig.
F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm ..... Location.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodrigez Sur. ..... T.D. 2,223 ft.; fishing.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 1-B Walker, 320 ft. from NW line, 150 ft. from NE line of Walker lease, Solomon Seal Sur.. T.D. 2,460 ft.; bridged; standing in oil.
Cole et al's No. 1 Pierce, 400 ft. from NE line, 445 ft. from NW line of Pierce 100-ac. tract in Solomon Seal Sur. ..... Derrick on ground.
Dickson & McDowell's No. 1 G. and S. C. Walker, 150 ft. from NE and NW lines of Walker 40-acre tract, Solomon Seal Sur. ..... T.D. 2,138 ft.; packer stuck.
Hadley et al's No. 1 Nugent ..... T.D. 2,100 ft.; S.D.
Owen & Gunby's No. 1 Dunlap, 700 ft. SW of Smilock's No. 1 Dunlap and 150 ft. from SE line of tract, S. Seal Sur. ..... T.D. 2,117 ft.; coring.
Smilock Oil Co.'s No. 1 Dunlap, offsetting Bob Rose's No. 1 Pierce, in Solomon Seal Sur ..... T.D. 2,400 ft.; drilling out bailer.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ..... Spudded in.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ..... Derrick.
C. J. Webster Oil & Gas Co.'s No. 1-A McCrory, 75 ft. NW of No. 1 McCrory in John A. Neill Sur. ..... T.D. 2,083 ft.; flowing through tubing.

COLE POOL—DUVAL COUNTY

Cole Petroleum Co.'s No. 76 Benavides, 1,010 ft. from NE lines, 150 ft. from NW lines of Blk. 8, Sec. 19, Cole Subd. of Mariano Arispe grant ..... T.D. 1,753 ft.; bailing.

GOVERNMENT WELLS—DUVAL COUNTY

F. J. Bissonet and Wm. McGinley's No. 1 Lundell, 150 ft. from E line, 660 ft. from S line of Sur. No. 48 ... Location.
Buchanan & Terrell's No. 1 R. T. Ellison, 150 ft. from S and E lines of NE NW Sur. 44 ..... T.D. 2,301 ft.; comp. 46 bbls. hourly on ¾-in. choke.
Buchanan & Terrell's No. 2 R. T. Ellison, 510 ft. from E line, 150 ft. from S line of NE NW of Sur. 44 ..... Location.
R. F. Byrd's No. 1 R. T. Wright, 150 ft. from N and W lines of Sur. 101 ..... T.D. 2,311 ft.; plugging back.
H. H. Coffield's No. 2 Wendt, 150 ft. from N and E lines of SE NE, Sur. No. 43 ..... Rigging up.
Humble Oil & Refining Co.'s No. 4 White, 2,310 ft. from S line, 1,320 ft. from W line of Sur. 58 ..... T.D. 2,210 ft.; drlg.
Magnolia Petroleum Co.'s No. 2 J. T. Johnson, 150 ft. from S and W lines of NE of Sur. No. 44 ..... T.D. 2,330 ft.; set csg.
Magnolia Petroleum Co.'s No. 2 Wendt, 150 ft. from S and W lines of NW of Sur. No. 44 ..... T.D. 2,302 ft.; estimated 250 bbls.
Magnolia Petroleum Co.'s No. 1 Brodbeck, 150 ft. from S and E lines of W half NW NE Sur. No. 44 ..... Rigging up.
George Parr's No. 1 Benavides School, 150 ft. from S and W lines of Sur. No. 44 ..... Derrick.
Petroleum Finance Corp.'s No. 1 C. W. Hahl, 150 ft. from N and W lines of SW Sur. No. 46 ..... T.D. 1,250 ft.; waiting for water.
San Diego Oil Corp.'s No. 1 Riley, 150 ft. from N and W lines of W half of NW of Sur. 46 ..... T.D. 850 ft.; drlg.
San Diego Oil Corp.'s No. 1 L. Bennett, 150 ft. from S and W lines of SE SW Sur. No. 44 ..... Rigging up.
Seacord & Putnam's No. 1 Johnson, 150 ft. from S and E lines of NW NW of Sur. 44 ..... T.D. 2,305 ft.; setting csg.
Southwest Drilling Co.'s No. 2 Wendt, 150 ft. from N and E lines of SE of Sur. 43 ..... Location.
The Texas Company's No. 1 Freer, 150 ft. from N and E lines of Sur. No. 45 ..... Set surface csg.
The Texas Company's No. 1 Riggs, 150 ft. from N and W lines of E half of NW of Sur. No. 46 ..... T.D. 1,527 ft.; drlg.
The Texas Company's No. 2 Riggs, 150 ft. from N and E lines of E half of NW of Sur. No. 46 ..... Location.
The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE Sur. No. 45 ..... Location.
Whisenant, Trenchard & French Oil Corp.'s No. 1 C. W. Hahl, 230 ft. from S line, 820 ft. from E line of SW SW of Sur. 44 ..... Changed location.
Windsor Oil Co.'s No. 2 L. L. Cummings, 450 ft. from S line, 150 ft. from E line of E of NW NE of Sur. 44 ..... T.D. 1,412 ft.; drlg.

SARNOSA FIELD—DUVAL COUNTY

Edwin M. Jones' No. 1 J. F. Williams, 2,156 ft. from NE line, 150 ft. from NW line of Sur. No. 131 ..... Location.
Smith & Capps' No. 2-A Duval County Ranch Co., 200 ft. from SE and SW lines of W half of Sur. No. 574 ..... Location.
The Texas Company's No. 1 R. L. Brown, 150 ft. from SE and SW lines of Sur. No. 574 ..... Location.
The Texas Company's No. 2 Ruiz, 150 ft. from NE and SE lines of Sur. No. 127 ..... Rigging up.
John F. Camp's No. 2 Weil, 1,200 ft. N, 18 deg. W of No. 1 Weil in Sur. No. 570 ..... Set surface csg.
E. R. Thomas' No. 1 Duval County Ranch Co., 150 ft. from SE and NE lines of E and S of Sur. 576 ..... Location.
Smith & Capps' No. 2 Duval County Ranch Co., 2,210 ft. from NW line, 150 ft. from NE line of Sur. 576... T.D. 2,330 ft.; set csg.
Smith & Capps' No. 3 Duval County Ranch Co., 200 ft. from NE and SE lines of N of Sur. 576 ..... T.D. 2,414 ft.; testing

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,660 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. .. T.D. 4,243 ft.; pulling tubing.

DARST CREEK—GUADALUPE COUNTY

Humble Oil & Ref. Co.'s No. 5 Dan Denman ..... T.D. 1,910 ft.; drlg.

SAL-MAR FIELD—GUADALUPE COUNTY

R. R. Ogden's No. 1 Zunker, 500 ft. from S line, 165 ft. from E line of tract in L. Bollinger Sur. ..... Location.
A. W. Wormser's No. 1 Pfullman, 450 ft. W of Sal-Mar Oil Co.'s No. 1 Zunker in L. Bollinger Sur. .... T.D. 2,031 ft.; standing.
A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur..... Derrick.

LOBO FIELD—LIVE OAK COUNTY

John F. Camp et al's No. 1 Reagan, 3,100 ft. from E line, 21,200 ft. from N line of L. F. Reagan tract .... T.D. 2,526 ft.; abnd.

JACOB POOL McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 1-B Jacob, Sec. 15 G.H.&H. Ry. Sur. ..... T.D. 1,065 ft.; bailing.
Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E. W. B. Scrugham Sur. ..... Moving in.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Two Rivers Ranch, SE cor. of Sec. 59, 5 miles S of Wentz ..... T.D. 1,225 ft.; drlg.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1 Adams, 420 ft. from S line, 2,000 ft. from W line of F. Mumme Sur. ..... Location.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots ..... T.D. 1,612 ft.; drlg.
Gulf Coast Oil Co.'s No. 1 Frank Bliss, 330 ft. from S and E lines of N half of 225-ac. tract ..... T.D. 1,310 ft.; drlg.
Kepley et al's No. 2 Roark, 150 ft. from S and W lines of Roark lease ..... Rigging up.
McCarthy-Rogers-Nix et al's No. 1 Isaacs, 151 ft. from W line, 172 ft. from N line of Blk. 12 of Shepherd farm lots ..... Rigging up.
Saxet Oil Co.'s No. 2 Walton, 200 ft. from S line, 629 ft. from W line, N offset to Sun-Kepley Donegan ..... T.D. 2,433 ft.; testing sand.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co.'s No. 4 Welder, 1,900 ft. S, 30 deg. E of No. 3 Welder ..... T.D. 5,620 ft.; drlg.

LOS OLMOS POOL—STARR COUNTY

V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE, Sec. 6, Porcions 75, 76 and 77 ..... Location.
Hooks & Weaver's No. 8 Kelsey Bass, 450 ft. from S and W lines of E 30 acres of NE SW Section 6, Porcions 75, 76 and 77 ..... TD. 310 ft.; drlg.
J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... Location.
Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porcions 75, 76, 77 ..... T.D. 1,400 ft.; standing.
Los Olmos Oil & Gas Co.'s No. 16 Kelsey Bass, 300 ft. from N line, 450 ft. from E line of NE NW of Sec. 7, of Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... T.D. 465 ft.; 15 bbls.
Los Olmos Oil & Gas Co.'s No. 17 Kelsey-Bass, 150 ft. from S and W lines, NW SE of Sec. 7, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... T.D. 465 ft.; in sand.
Los Olmos Oil & Gas Co.'s No. 20 Kelsey Bass, 250 ft. from S line, 600 ft. from E line of SE of SW of Sec. 6, Porciones 75, 76, 77 ..... Spudded in.
Los Olmos Oil & Gas Co.'s No. 21 Kelsey Bass 750 ft. from N line, 650 ft. from W line of NE of NW of Sec. 7, Porciones 75, 76, 77 ..... T.D. 435 ft.; comp. 35 bbls.
Los Olmos Oil & Gas Co.'s No. 22 Kelsey Bass, 450 ft. from S line, 150 ft. from W line of NW SE of Sec. 7, Porciones 75, 76 and 77 ..... Location.
Los Olmos Oil & Gas Co.'s No. 23 Kelsey Bass, 180 ft. from S line, 975 ft. from W line of SE SW of Sec. 6, Subd. of Porciones 75, 76 and 77, Jurisdiction of Camargo ..... Location.
Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porcions 75, 76, 77 ..... Abnd.

RIO GRANDE CITY POOL—STARR COUNTY

Echols et al's No. 1 Doyno, 450 ft. from N line, 160 ft. from W line of Lot 6, Share 77-A, Porcion 81 ..... T.D. 812 ft.; drlg.
Coastal Oil & Gas Co.'s No. 1 Olivarez, 150 ft. from NE and SE lines of easternmost corner of Share 35, Porcion 80, Camargo ..... Derrick.
L. W. Connor's No. 1 Goodrich, 150 ft. from N and E lines of Tract 5, Lot 5, Porcion 81 ..... Drlg. 300 ft.
Gulf Coast Oil Co.'s No. 1 Frank Doyno, 150 ft. N of C of S line of Blk. 4, Share 77-A, Por. 81, Camargo.. T.D. 1,461 ft.; pumping 75 bbls.
T. J. Heard's No. 1 Block, 150 ft. from S and E lines of Lot 4, Tract 28-A of Por. 80, Jurisdiction Camargo... T.D. 2,000 ft.; standing.
Heard & Swift's No. 1 Frank Doyno, 450 ft. from E line, 150 ft. from S line of Blk. 8, Share 77-A of Porciones 80 and 81 ..... T.D. 1,437 ft.; estimated 40 bbls.

R. E. Johnson's No. 1 F. H. de Izaguirre, 150 ft. from E line, 450 ft. from N line of Share 36-A, Porcions 80-81, Jurisdiction of Camargo ..... Location.
King Pin Oil Co.'s No. 1 T. C. Lewis, 207 ft. from E line, 111 ft. from S line of Share 22, Porcion 80, Jurisdiction of Camargo ..... Derrick.
Edgar Swift's No. 2 Frank Doyno, 750 ft. from E line, 470 ft. from S line of Blk. 8, Share 77-A, Porcion 81.. Rigging up.
Tarver & Nance's No. 1 Seabury et al, 400 ft. from W line, 150 ft. from N line of Tract 21, in Porcion 79, Camargo ..... T.D. 2,310 ft.; testing.
Traylor-Munday-Flowers' No. 1 Frank Doyno, 150 ft. from S and W lines of Blk. 7, Share 76-A, Porcions 80 and 81 ..... T.D. 1,550 ft.; abnd.
Traylor et al's No. 1 Laborde, 150 ft. from S and W lines of W 20 acres of Lot 6, Tract 5, Porcion 81 .... T.D. 1,460 ft.; drlg.

ROSENBERG POOL—WEBB COUNTY

Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 247 ..... Derrick.
Phillips Rosenberg's No. 3 Laurel, 150 ft. from E line, 1,149 ft. from N line of Lot 10, Sur. No. 271 ..... T.D. 2,243 ft.; comp. 300 bbls.
South Texas Oil Co.'s (Rosenberg) No. 4 Laurel, in Blk. 10, Sur. No. 271 ..... T.D. 715 ft.; drlg.

WEST COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 1 Rosa Benavides, 450 ft. from S and W lines of Sur. No. 659 ..... Rigging up.

CHAPMAN POOL—WILLIAMSON COUNTY

Westbrook Oil Co.'s No. 9-B Lawrence, 340 ft. NE of No. 8-B and 150 ft. from SE line of 27-ac. tr. in S. Miller Sur. ..... Location.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 33 Gutierrez, 867 ft. from NE line, 1,260 ft. from SE line of Share 4, Comitas grant. T.D. 1,467 ft.; comp. 75 bbls.
Blankenship & Hill's No. 1 Montemayor, 150 ft. from W line, 450 ft. from S line of Blk. 6, Sur. No. 64 ..... Location.
F. M. Blair & Son's No. 1 Montemayor, 450 ft. from N line, 150 ft. from E line of Blk. 1, Sur. 63 ..... T.D. 1,642 ft.; standing.
McGinley Oil Corp., No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.
Shankle and Newton Oil Co.'s No. 18 Trevino, 338 ft. from SE line, 200 ft. from SW line of Blk. 14, Sur. 65 ..... T.D. 1,012 ft.; drlg.
The Texas Co.'s No. 10 Measles, 17,100 ft. from SW line, 1,135 ft. from SE line of Cerrito Blanco grant... Rigging up.

CHARCO REDONDO POOL—ZAPATA COUNTY

L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Duke's Subd. of Charco Redondo grant ..... Location.
Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 15, of W. R. Duke Subd., Charco Redondo grant ..... T.D. 690 ft.; drlg.

MARTINEZ FIELD—ZAPATA COUNTY

Newton Drilling Co.'s No. 2 Garza, 225 ft. from N line, 1,000 ft. from W line of Blk. 4, Sur. 161 ..... T.D. 1,915 ft.; drlg.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 113)

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11 ..... Location.
Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 21-14-10 ..... S.D. 929 ft.
La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11 ..... Spudded and S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e ..... S.D. 2,515 ft.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 406 ft. N, 200 ft. W, SE cor. NE NE, Sec. 35-8-13 ..... Set 10-in. at 100 ft.
R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE ..... Set 6-in. 2,431 ft.
Bridwell Oil & Gas Co.'s No. 1 Bray, 200 ft. N and W, SE cor., SE NW Sec. 32-8-11 ..... Location.
Bridwell Oil & Gas Co.'s No. 2 Bray, 200 ft. S, 90 ft. W, NE cor. NE SW Sec. 32-8-11 ..... Rigging up.
R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 ..... Location.
V. V. Bull's No. 1 Henderson, 275 ft. N, 165 ft. E, SW cor. SW SE, Sec. 31-8-10 ..... Derrick.
F. M. Burke's No. 1 Gray, 454 ft. N, 265 ft. W, SE cor. SW SW, Sec. 3-7-13 ..... Drlg. 2,365 ft.
Bob Chew's No. 1 O. Gray, 330 ft. N and E, SW cor. SW NW, Sec. 35-8-13 ..... Location.
Cliff Oil Co.'s No. 1-A Martinez School, 720 ft. N, 105 ft. W, SE cor. NE SE, Sec. 4-7-13 ..... W.O.S.R. 2,450 ft.
Clopton et al's No. 1 Campbell, 335 ft. S, 353 ft. W, NE cor. NW NE Section 5-7-11 ..... Derrick.
Clopton et al's No. 1 Garcia, 330 ft. N and W, SE cor. SE NW Sec. 4-7-13 ..... Derrick.
W. M. Coates' No. 1 Gray, 330 ft. N and W, SE cor. SW, Sec. 3-7-13 ..... Location.
W. M. Coates' No. 2 Gray, 330 ft. S and W, NE cor. SE SW, Sec. 3-7-13 ..... Location.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 ..... W.O.S.R. 2,465 ft.
Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 ..... Location.
The Coming Oil Co.'s No. 1 Cobb, 330 ft. N and E, SW cor., Sec. 14-7-11 ..... Derrick.
Craig et al's No. 1 Travis, Sec. 13-7-11, 200 ft. S and E, NW cor. SE NW ..... W.O.S.R. 2,580 ft.
Crescent Drlg. Co.'s No. 1 Williams, 370 ft. E, 330 ft. S, NW cor. N½ SW, Sec. 21-7-12 ..... Location.
Crescent Drlg. Co.'s No. 2 Williams, 330 ft. S and W, NE cor. SE NW, Sec. 21-7-12 ..... Location.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 ..... Derrick.
R. E. Davidson's No. 1 Davis, 600 ft. S, 125 ft. E, NW cor., Sec. 28-7-11 ..... Derrick.
William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 35-8-13 ..... Derrick.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW ..... Testing 2,150 ft.
Harry Flinchbaugh's No. 1 Sepulbedo, 250 ft. N and E, SW cor. SE NE, Sec. 4-7-13 ..... Bailing 2,424 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13 ..... S.D. for wtr., 6,052 ft.
W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE, Sec. 30-8-12 ..... Rigging up.
Howard et al's No. 1 Williams, 300 ft. N and E, SW cor. SE NW, Sec. 13-7-11 ..... W.O.S.R. 2,580 ft.
J. B. Huges' No. 1 Stille, 283 ft. N, 383 ft. W, SE cor. SE SW, Sec. 36-8-11 ..... Swabbing 2,682 ft.
Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 ..... Rigged up, S.D. for wtr.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 ..... Rigged up and S.D. for water.
A. D. King, tr.'s No. 1 Davis, 170 ft. N, 410 ft. E, SW cor. NW NE, Sec. 29-7-11 ..... Location.
A. D. King, tr.'s No. 1 Germain, Sec. 7-7-10, 330 ft. E, 518 ft. N, SW cor. NE NE ..... Dry and abd. 2,685 ft.
A. D. King, tr.'s No. 1 T. L. Andries, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11 ..... Derrick.
A. D. King, tr.'s No. 1 J. J. Andries, 140 ft. S, 240 ft. W, NE cor. SE SW, Sec. 15-7-11 ..... Dry and abd. 2,715 ft.
S. A. Lane et al's No. 1 DeKeyser, 233 ft. E, 330 ft. S, NW cor. NE, Sec. 23-7-11 ..... Drlg. 2,867 ft.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... S.D. 1,450 ft.
Magnolia Pet. Co.'s No. 1 Williams, 155 ft. S, 408 ft. W, NE cor. NW, Sec. 6-7-10 ..... Location.
H. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-13 ..... Derrick.
Paul L. Miller's No. 1 Lucius, 175 ft. N and W, SE cor. NE SW, Sec. 31-8-10 ..... Rigging up.
Hill Myers' No. 1 Garcia, 200 ft. N and W, SE cor. SW NW, Sec. 4-7-13 ..... S.D. 1,500 ft.
E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ..... W.O.S.R. 2,541 ft.
Neely et al's No. 1 C. Henry, Sec. 23-7-11 ..... Derrick.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft N, 660 ft. W, SE cor. Sec. ..... W.O.S.R. 2,509 ft.
C. D. Neff, tr.'s No. 1 Peterson, 200 ft. N and E, SW cor. NW NW, Sec. 36-8-13 ..... Dry and abd. 2,405 ft.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE..... Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11..... Location.
Pelican Natural Gas Co.'s No. 2 Buckley, 330 ft. S and W, NE cor. NW NW, Sec. 6-7-10 ..... Rigging up.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10..... Derrick.
J. H. Reeves' No. 1 Sabine State Bank, NE SW, Sec. 28-8-11 ..... W.O.S.R. 2,575 ft.
Thornton et al's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 ..... Derrick.
Otis A. Roberts' No. 2 S. S. Martinez, 312 ft. E, 25 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Set 10-in. 100 ft.; drlg. 300 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 224 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 ..... Derrick.
Bill Rowe's No. 1 Sepulbedo, 530 ft. N, 200 ft. E, SW cor. SE SE, Sec. 4-7-13 ..... Drlg. 1,700 ft.
Sculley & Black's No. 3 Lafitte, 1,400 ft. S, 133 ft. W, NE cor. NW NW, Sec. 13-7-11 ..... Location.
Skully & Beach's No. 2 Lafitte, 149 ft. S, 228 ft. E, NW cor., Sec. 13-7-11 ..... S.D. 1,500 ft. for water.
H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW..... Location.
W. W. Smith et al's No. 1 Sepulbedo, 230 ft. N, 250 ft. W, SE cor., Sec. 4-7-13 ..... Coring 2,005 ft.
Sneed & Sneed's No. 1 Pearce, 200 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 ..... Bailing 2,405 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11..... S.D. 1,905 ft.
H. B. Stacey et al's No. 1 Hefkobits, 457 ft. N, 583 ft. E, SW cor. SE, Sec. 34-8-13 ..... Derrick.
State Prod. Co., Inc.'s No. 1-B Davis, 200 ft. N and E, SW cor., Sec. 17-7-10 ..... Derrick.
Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 ..... Fishing 1,386 ft.
B. E. Taylor's No. 1 Gay, 232 ft. S, 476 ft. E, NW cor. SE SW, Sec. 36-8-13 ..... Location.
B. E. Taylor's No. 1 Wooley, 330 ft. N and E, SW cor. SE SW, Sec. 36-8-13 ..... Location.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 300 ft. N, SW cor. NW..... W.O.S.R. 2,600 ft.
A. F. Tarver's No. 1 R. Stoker, 1,980 ft. S, 1,320 ft. W, NE cor., Sec. 34-8-10 ..... Tested dry 3,250 ft.; S.D.; W.O.
Thornton et al's No. 2 S. S. Martinez, 312 ft. E, 205 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Rigging up.
A. A. Trammell's No. 1 Sepulbedo, 330 ft. N and W, SE cor. NW NE, Sec. 5-7-13 ..... Derrick.
Triangle Drlg. Co.'s No. 1 La.-Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... Rigged up.
W. C. Turnbow's No. 1 Williams, 200 ft. W C E line SW NW, Sec. 13-7-11 ..... Location.
W. C. Turnbow's No. 2 Williams, 178 ft. S, 200 ft. E NW cor. SW NW, Sec. 13-7-11 ..... Coring 2,440 ft.
Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 ..... Set 10-in. 100 ft.
C. C. Walker's No. 1 Noble-Neely, 330 ft. S and E, NW cor. SW, Sec. 36-8-13 ..... Drlg. 1,650 ft.
Wurtsbaugh & Torren's No. 1 Peterson, 330 ft. N and W. SE cor. SW NE, Sec. 26-8-13..... Location.
Wurtsbaugh & Torran's No. 1 Gray, 330 ft. N and SE cor. SE NW, Sec. 35-8-13 ..... Drlg. 1,330 ft.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12..... Reaming 3,590 ft.

VERNON COUNTY

Liano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ..... S.D. 1,300 ft.

WEBSTER PARISH

George Pearce et al's No. 1 Ambrose, 200 ft. N and W, SE cor. SW SE, Sec. 22-20-10 ..... Derrick.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W. NE cor. SW, Sec. 28-13-3 ..... Rigging up.

ARKANSAS

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-8 ..... 1,253 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12..... Rigged up and S.D.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15..... S.D. 2,575 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW..... Drlg. 2,604 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16..... S.D. 1,340 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7..... Fishing for drill stem 2,800 ft.

LITTLE RIVER COUNTY

Harrell et al's No. 1 Taffee, 32 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12s-32w ..... Derrick.

MILLER COUNTY

C. E. Litchfield's No. 1 Hervey, 525 ft. S, 350 ft. W, NE cor. NE NW, Sec. 2-15-26 ..... T.A. 2,885 ft.
Fitzwater et al's No. 1 E. A. McCowand, NW cor. NW SE, Sec. 22-15-28 ..... Location.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 ..... Derrick.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26 ..... S.D. 2,926 ft.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17.. W.O.S.R. 2,208 ft.
McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW..... S.D. 102 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ..... Drlg. 525 ft.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 21-8-24..... S.D.; W.O. 1,020 ft.
E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23..... Rigging up on new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-22, S½ SW... S.D. 950 ft.

ST. FRANCIS COUNTY

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. 2,500 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 3-16-16 ..... Rigging up.
H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... S.D. 2,875 ft.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13..... S.D. 1,678 ft.

WASHINGTON COUNTY
(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32..... S.D. 1,750 ft.

EAST TEXAS

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.
Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

M. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur... S.D. 85 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Derrick.
Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E. SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... Reaming to bottom 3,996 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.
Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur... S.D. for D.S. 740 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 3,055 ft.

SHELBY COUNTY

K. H. Francis' No. 1 John Mims, Mary Smith Sur. ..... Rigged up on new hole.
General Minerals Co.'s No. 2-B Holt, Matthew Moore Sur. S.D. 3,951 ft.
General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Rigging up.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Rigged up on new hole.
McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. ..... S.D. 3,393 ft.
Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Burleson Sur.. Set 10-in. at 505 ft.
Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... Drlg. 2,021 ft.
Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D.; W.O. 1,768 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... S.D. for D.S. 2,054 ft.

Louisiana-Arkansas Proven Areas

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, well, farm name, section and block—	Remarks:
Louana Oil & Gas Co.'s No. 1 Cushman, 1,380 ft. N, 600 ft. E, SW cor., Sec. 33-19-16	Drlg. 1,260 ft.

CLAIBORNE PARISH

Triangle Drlg. Co.'s No. 1 Brown, 1,542 ft. N, 1,900 ft. W, SE cor. NE, Sec. 1-19-6	Rigging up.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50	Location.
J. J. Potts, trustee's No. 2 Robertson-Reid, 531 ft. N, 825 ft. E, SW of Sec. 11-18-4e	Comp. 1,200,000 ft. gas 2,213 ft.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulton, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13	Rigged up and S.D.
Abbott & Rankin's No. 1 Towley, 330 ft. S and E, NW cor. SE NW, Sec. 1-7-13	Rigging up.
Acme Oil & Gas Co.'s No. 3 La. Long Leaf, 535 ft. W, 50 ft. N, SE cor., Sec. 3-7-11	Derrick.
Baird Bros.' No. 2 S. S. Martinez, NW cor. NW SW Sec. 2-7-13	Rigging up.
Coates Pet. Co.'s No. 2-B Nulton, 330 ft. N and E, SW cor. SW NE, Sec. 3-7-13	Set 10-in. 100 ft.
Coates Pet. Co.'s No. 3 S. S. Martinez, 330 ft. S, 200 ft. E NW cor. SE NE Sec. 3-7-13	Set 10-in. 2,108 ft.
Dengail O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13	6-in. 2,167 ft.
Dengail O. & G. Co.'s No. 1-G Nulton, 350 ft. N, 330 ft. W, SE cor. NE NE, Sec. 3-7-13	W.O.S.R. 2,419 ft.
Dengail O. & G. Co.'s No. 2-G Nulton, 330 ft. N and E, SW cor. NE NE, Sec. 3-7-13	S.D; W.O. 2,475 ft.
Edwards & Hubien's No. 1 Martinez, 855 ft. E, 541 ft. N SW cor., Sec. 2-7-13	Derrick.
J. E. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11	Set 6-in. 2,338 ft.
E. W. Gill's No. 1 Gray, 200 ft. S and W, NE cor. SW SW Sec. 3-7-13	Rigging up.
J. J. Hall's No. 4 Jacoba, 175 ft. W, 300 ft. N, SE cor. Sec. 1-7-11	Set 10-in. 101 ft.
D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11	Location.
H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11	Derrick.
W. F. Lacey's No. 2 Hughes, 330 ft. S and E, NW cor. E½, Sec. 10-7-11	Set 6-in. 2,375 ft.
W. F. Lacey's No. 2 Hughes, 40 ft. N, 106 ft. W, SE cor. NW SW, Sec. 11-7-11	S.D.W.O. 2,621 ft.
Lanier et al's No. 2 Newton, 400 ft. N, 330 ft. W, SE cor. NW, Sec. 3-7-13	Set 6-in. 2,073 ft.
Lion Oil Ref. Co.'s No. 1 LaRoux, 348 ft. N, 330 ft. E, SW cor. S½ NE SE, Sec. 2-7-13	Comp. flowing 30 bbls. 2,465 ft.
Lion Oil Ref. Co.'s No. 2 LaRoux, 384 ft. S and W, NE cor. SW SE, Sec. 3-7-13	Location.
Loring Oil Co.'s No. 18 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12	Arrang. to set 8⅝-in. at 5,272 ft.
Loring Oil Co.'s No. 1 Martinez, 330 ft. N and W SE cor. NW NE, Sec. 3-7-13	Testing 2,066 ft.
H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E, 150 ft. N, SW cor. NW SE, Sec. 15-7-11	Derrick.
Frank Melat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11	Rigging up.
Ben Merritt, trustee's No. 1-B Nulton, 570 ft. N, 250 ft. W, SE cor. SW NE, Sec. 3-7-13	Set 6-in. 2,087 ft.
C. D. Neff, tr.'s No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11	Derrick.
Pelican Natural Gas Co.'s No. 14 La. Long Leaf Lbr. Co., 330 ft. S and E, NW cor. NW NE, Sec. 8-7-11	Pumping 10 bbls. 2,404 ft.
Pelican Nat. Gas Co.'s No. 15 Louisiana Long Leaf Lbr. Co., 330 ft. N and W, SE cor. SE SW, Sec. 5-7-11	Drlg. 1,081 ft.
T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12	Derrick.
F. G. Reid's No. 1-B McNeely, 400 ft. S, 110 ft. W, NE cor. NE NW, Sec. 14-7-11	Pumping 40 bbls. 2,508 ft.
F. G. Reid's No. 4-A McNeely, 200 ft. S and W, NE cor. NW NE, Sec. 14-7-11	Testing 2,570 ft.
C. T. Ruffian's No. 2 Libby, 330 ft. S and E, NW cor. NE NW, Sec. 8-7-11	Drlg. 1,150 ft.
Howard Russell's No. 1 Porter, 680 ft. N, 230 ft. W, SE cor., Sec. 7-7-11	Dry and abd. 2,545 ft.
Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW	S.D.; W.O. 2,699 ft.
Sabine Prod. Co.'s No. 2 Sabine Lbr. Co., 330 ft. S and E from center of Sec. 3-7-13	Set 10-in. 102 ft; Drlg. 860 ft.
Self & Kissick's No. 2 Moran, C W½ SE NE, Sec. 1-7-11	Set 10-in. 102 ft; Drlg. 125 ft.
Service Drlg. Co.'s No. 3-A Gardner, 138 ft. S, 134 ft. W, NE cor., Sec. 12-7-11	W.O.S.R. 2,454 ft.
Ben F. Smith's No. 1 fee, 330 ft. S, 400 ft. E, NW cor. Sec. 4-7-11	Comp. 130 bbls. 2,346 ft.
W. S. Smith, trustee's No. 1 Hamilton, 330 ft. N and E, SW cor. NE NE, Sec. 32-8-11	Derrick.
F. E. Stancil's No. 1 Pouder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11	S.D. 2,593 ft.
F. E. Stancil's No. 2 Pouder, 805 ft. N, 283 ft. E, SW cor. SE SE, Sec. 10-7-11	Location.
State Prod. Co.'s No. 1 Keazele, 150 ft. N and W, SE cor. NW SW, Sec. 3-7-13	Rigging up.
State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W SE cor. NW SW Sec. 3-7-13	Drlg. 1,425 ft.
The Texas Company's No. 2 Nabours, 576 ft. W, 237 ft. S NE cor. SE, Sec. 2-7-11	Rigged up.
E. M. Thompson's No. 1 Travis, 350 ft. N and E, SW cor. SE SW, Sec. 12-7-11	Bailing 2,495 ft.
A. A. Trammell's No. 1 Hill, 330 ft. S and W, NE cor. SE SE, Sec. 32-8-11	Rigging up.
J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13	Coring 2,000 ft.

UNION PARISH

Southern Carbon Co.'s No. 60 fee, 36 ft. W, 482 ft. S, NE cor. NW, Sec. 20-20-4e	Drlg. 1,600 ft.

ARKANSAS

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13	T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13	Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW	T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE	S.D. 1,730 ft.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur.	S.D. 3,359 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur.	Location.

MISSISSIPPI

HINDS COUNTY

Joe A. Baker et al's No. 1 Hudson, 380 ft. W, 700 ft. S, NE cor. NW NE, Sec. 11-5n-1e	Comp. 20,000,000 ft. gas 2,454 ft.
Henslee et al's No. 1 Warner, 200 ft. S and E NW cor. NE SE, Sec. 14-5n-1e	Waiting on csg. 2,464 ft.
Cleve Nooe et al's No. 1 Security Realty Co., 700 ft. E, 300 ft. S, NW cor. NE NW, Sec. 1-5n-1e	Drlg. 2,220 ft.
McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 250 ft. N, 450 ft. W, from center of Sec.	T.A. 2,487 ft.

RANKIN COUNTY

Meredith-Smith et al's No. 3 Strawder, 400 ft. S, 750 ft. W, NE cor., Sec. 12-5n-1e	Drlg. plug 2,343 ft.

Wildcat Operations in Mississippi

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e.	S.D. 104 ft.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE	Set 5½-in. 2,485 ft.
Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec.	Reaming to bottom 3,050 ft.

LAMAR COUNTY

Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 18-2n-14w.	Drlg. 2,310 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	Reaming 2,100 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w	Reaming 1,000 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e	S.D. 1,520 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e..	S.D. 1,735 ft.

RANKIN COUNTY

James Alexander, tr.'s No. 1 Holmaa, 445 ft. E, 375 ft. N, SW cor. NW, Sec. 31-6n-2e	Drlg. 2,456 ft.
Ferguson Fuller et al's No. 1 Ivey, 120 ft. W and S NE cor. NW, Sec. 13-5n-1e	S.D. 2,340 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e.	Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	S.D. 750 ft.

Wildcat Operations in Alabama

LAMAR COUNTY
(Cable tools)

Company, well, farm name, section and block—	Remarks:
DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 22-15s-16w	Drlg. 2,670 ft.

MOBILE COUNTY

Ohio Oil Co.'s No. 1 James Bethel, 330 ft. N and E, 3,300 ft. E of NW cor. SW SE, Sec. 34-3s-2w	Set 9⅝-in. 3,295 ft.
J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w	Drlg. 1,705 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w.	Rigging up.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

SENSITIZED PAPER FOR DETECTING WATER

How is the paper treated which is used for detecting the water level in storage tanks? Would a solution of iron citrate be suitable? Of course we know and use the universal method of chalk or molasses on an ordinary steel rod but in this case it is necessary that we use the paper method if possible.—L. L. R.

Any colored substance that is not soluble in gasoline or oil should be suitable for making a sensitized paper which may be used for detecting a water level in tanks and tank cars. There are a number of dyestuffs that are insoluble in gasoline but readily soluble in water, and several of the inorganic salts should prove satisfactory for the purpose. Ordinary blue litmus paper has been used and turmeric paper when freshly prepared has been found satisfactory for detecting water in gasoline.

Some of the laboratories prepare a solution containing:

	Grams
Iron hydrate	1.0
Dextrin	16.0
Calcium chloride	10.0
Glycerin	6.0
Acetic acid	4.0
Distilled water	40.0

The iron hydrate and acetic acid may be replaced with iron acetate.

A good grade of paper is dipped into this solution and after drying may be cut into strips of convenient size for use. A strip of this yellowish paper is attached at the side of the scale and close to the bottom of a gauge pole lowered into the car or tank, and after a few seconds withdrawn. If water is present, the color will disappear in the water area, so the decolorized or white portion of the paper will indicate the water level.

When either an inorganic salt or a dye is used for impregnating the paper the best results are obtained with light colors.

Dealers in laboratory supplies usually handle a sensitized paper prepared in strips suitable for detecting water in the presence of gasoline and other petroleum oils.

ASPHALT FROM PARAFFINIC CRUDE

We are refining a crude which contains a small percentage of asphalt but is for the most part a paraffin base oil. Is it possible to make a good asphalt from this kind of oil?—C. B. J.

Asphalts have been prepared from paraffin base oils, the production of a satisfactory product being a matter of chemical composition and the character of the refinery operations. This subject is well covered in an article, "The Working Up of Paraffinic Crude Oils to Good Paving Asphalts," by J. Hausman. Pet. Zeitschrift, February 24, 1932, page 1. This article has been abstracted in the Library Bulletin of Abstracts, VII, April 27, 1932, from which the material following has been taken:

There is a mistaken idea that good asphalt cannot be produced from a paraffin base oil. The determining factor is not whether paraffin is present or not but whether the oils contain asphaltogens that is, unsaturated compounds that can be condensed and polymerized to form the molecules of which asphalt is made up. The residuum from the flash chamber of a Dubbs cracking unit can be either cooled and stored as a fuel oil or it can be immediately worked up to asphalt by distilling off the light fractions with the aid of steam or by blowing with air till it is of the proper consistency. Practically no coke separation takes place in this method of operating and the same is true in "low-level operation," in which the cracked residuum is held at a very low level in the reaction chamber, being removed before it can break up into coke and tar. It is subjected to blowing with steam or air or a combination of the two, till an asphalt of the desired consistency is produced. Residuum from distilling a mixture of Ochiuri, Cepta, Mislu, and Campina semiparaffinic crude oil was cracked in continuous operation for 43 days, with a transfer temperature of 495° C. (923° F.), temperature in the line leading to the flash chamber of 462° C. (864° F.), and a gauge pressure before flashing of 11.7 atmospheres. The flashed residuum was converted to asphalt.

A flashed residuum from cracking a mixture of California and Pennsylvania petroleums was at one time blown with air at 490° F. in the Wilmington refinery of the Shell company, at another time it was blown with steam at 525° F. The results are compared below:

	Air	Steam
Distillate, pct.	4.38	5.14
Asphalt, pct.	95.62	94.84
Properties of asphalts:		
Spec. grav. at 77°F.	1.056	1.068
Penetration at 77°F.	106 mm.	99 mm.
Vaporized at 350°F. in 5 hrs., pct.	0.57	0.34
Penetration of the residue at 77°F.	94.5 mm.	89.5 mm.
Ductility at 60°F.	125 cm.	125 cm.
Ductility at 77°F.	125 cm.	125 cm.
Flowpoint (ring and ball)	117.60°F.	118.50°F.
Float test at 122°F.	5 min., 5 sec.	16 min., 59 sec.
Flashpoint, open crucible.	390°F.	420°F.
Fixed carbon, pct.	16.71	14.32
Solubility in carbon bisulphide, pct.	99.63	99.54
Solubility in carbon tetrachloride, pct.	93.60	92.15

Blowing with steam gave a better asphalt, it appears, than blowing with air.

FILTERING OR BLEACHING OF OILS

What substances are used in the bleaching of oils? What elements are incorporated with fuller's earth to increase its efficiency as a bleaching agent?—L. L.

The bleaching of petroleum oils is accomplished by the use of chemicals and certain filtering earths. The light oils, such as gasoline and kerosene, are decolorized by the use of chemicals alone; the lubricating oils usually are chemically treated and filtered. The important chemical is sulphuric acid, small quantities of an alkali, such as sodium hydroxide (caustic soda) and ammonia, being used in the form of alkaline washes to be certain that all traces of sulphuric acid have been removed from the product.

Fuller's earth has for many years been extensively employed for decolorizing all kinds of oils, vegetable, animal and mineral. The method used in the petroleum industry being by simple percolation through a large mass of the earth. Recently modifications of the method have been made to include treatment of the oil with sulphuric acid, then to follow this immediately with thorough agitation with a special clay and then to filter the mixture through a filter press. Some of these clays, also called mineral earths, are used without being treated but are not very powerful decolorants.

The method of treating the oil with sulphuric acid, mixing with a prepared earth, and then filtering is known as contacting. The treated earths used for the purpose are called activitated earths or clays. The preliminary treatment of the earth includes grinding the particles to a fine degree and then digesting it with sulphuric acid; next it is settled, the acid drawn off and the digested clay well washed with water. The mud or pulp remaining is the material that is used with the oil.

Activated earth, or contact clay, is the most powerful decolorizing agent now suitable for bleaching mineral oils. It is effective in neutralizing any acid that remains in the pulp and gives the maximum reduction in color.

There are numerous mineral earths that make good contact filtering mediums. The better known deposts are in California, Utah, Texas and Oklahoma. These clays are aluminum silicates with exceptional physical properties. They are of a colloidal nature and possess a certain openness of structure which permits considerable adsorption. The method of their reacting is similar to that of fuller's earth but they are much more effective. The chemical action of the treatment with acid and the washing removes organic material and salts to produce the open cells necessary to good filtration. It is thought that the chemical composition or structure of the chemical substances present has much to do with the effectiveness of the contact clays. A clay of the kaolin type does not make a good contact pulp because it contains no OH water groups that can be driven off. Bentonite does not make a good contact material because there are no large terminal alkali radicals present which are easily convertible by the acid treatment.

NATURAL GAS CARBON DIOXIDE DRY ICE

Would natural gas of the following analysis be suitable for the manufacture of dry ice: Carbon dioxide 0.60 per cent, oxygen 00.48, methane 92.70, ethane 2.00, nitrogen 4.22, helium 0.18. What is dry ice, how is it manufactured, and what equipment is necessary?—J. F.

The analysis, as submitted, seems to represent the normal natural gas as to substances present and percentages, with the possible exception of helium. Most of the natural gas contains small quantities of carbon dioxide, the quantity usually found ranging from a trace to a few per cent. The natural gas which is a commercial source of carbon dioxide contains this substance in large quantities, the most desirable gas containing over 90 per cent carbon dioxide and a few wells produce gas which is practically pure carbon dioxide. Carbon dioxide wells have been drilled in California, Colorado, New Mexico, Utah and Mexico. Some of these wells have been reported to have a daily production of approximately 100,000,000 feet.

Carbon dioxide is easily liquefied by compression and upon expansion the liquid forms a snow which may be compressed into a solid cake. This solid is known by several trade names, such as dry ice, dri ice, dioxice and solid carbon dioxide. The properties of solid carbon dioxide are shown in the table:

PROPERTIES OF SOLID CARBON DIOXIDE

Specific gravity	1.53
Sublimation point	109.6° F. below zero
Critical temperature	88.5° F.
Critical pressure	1,071 lbs. abs.
Latent heat of fusion	82 B.t.u./lb.
Latent heat of vaporization	159 B.t.u./lb.
Weight per cubic foot	90 lbs.
Latent heat sublimation	248 B.t.u.
Refrigeration effect	275 B.t.u.

Usually the carbon dioxide wells are under so much pressure that the solid may be formed by direct expansion. One well in Utah produces 15,000,000 feet a day under a pressure of 960 pounds. The pressure is enough to change one-fifth of the gas into "snow" by delivering it through an expanding nozzle against a wall in the snow room. This "snow" is collected and compressed into blocks.

The manufacturing process involves liquefaction of the gas by compressing it to about 1,000 pounds pressure and cooling it below 82° F. Three-stage compressors are used with water cooled cylinders. The liquid is cooled, either with or without the aid of external refrigeration, and the solid produced as above indicated.

The carbon dioxide produced from wells frequently contains traces of hydrocarbons and sulphur compounds which if not removed impart an objectionable taste and odor to the product. A purification process is therefore necessary in addition to compression. The larger part of the carbon dioxide used in commerce is obtained from the coke process and the purification steps used in that process indicate the kind of treatment required. The gas is passed through scrubbing towers, usually filled with coke or some other suitable distributing medium, counter current to solution of an alkaline carbonate, sodium carbonate being commonly used.

References: R. L. Hazlett, Dry Ice, The Oil and Gas Journal, August 6, 1931, page 15; W. T. Ziegenhain, Carbonic Products, The Oil and Gas Journal, September 17, 1931, page 14; J. H. Pratt, Liquid Carbon Dioxide, Industrial and Engineering Chemistry, 24, 613, 1932; D. H. Killeffer, Solid Carbon Dioxide, same, 24, 615, 1932.

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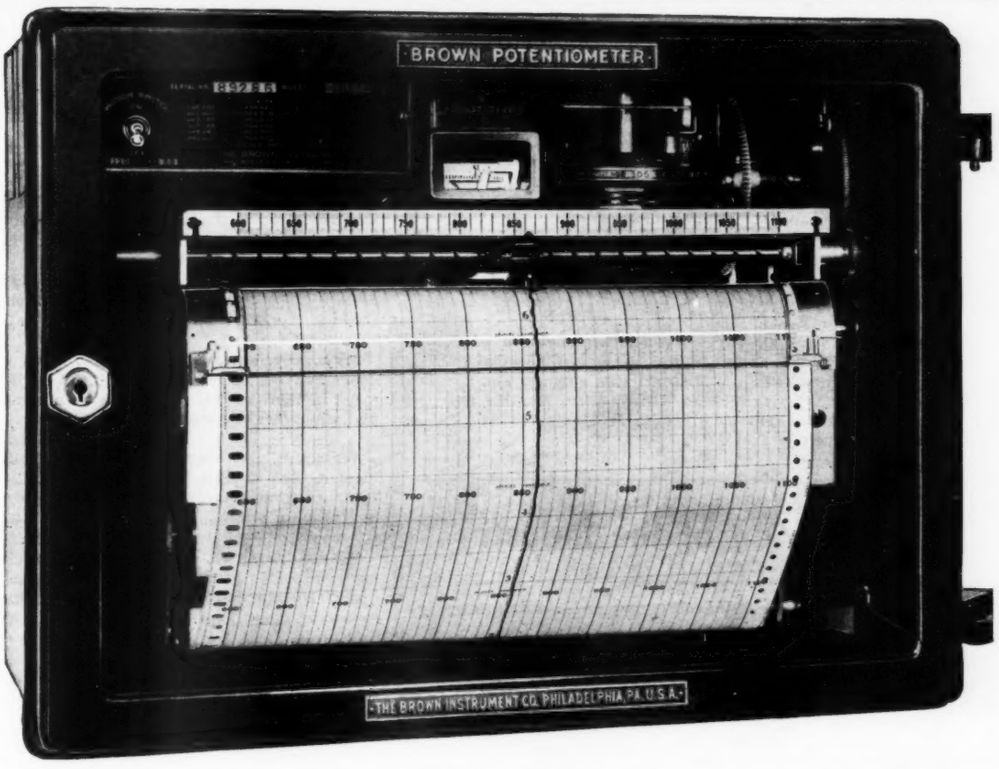

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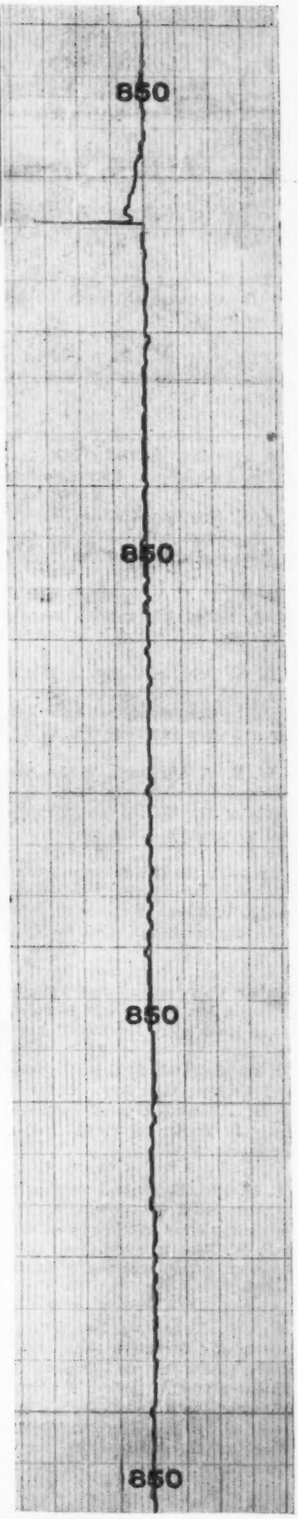

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PERSONAL PARAGRAPHS

O. W. Schlup has left Winthrop, Ark., for Oil City, Pa.

* * *

Dr. Stanislas Zuber, geologist, is on a visit to the North Apennine oil fields on behalf of the Italian government.

* * *

L. E. Garrett, vice president of the Gulf Production Company, Houston, Tex., vacationed at a summer home in Winslow, Ark.

* * *

Lawrence Oliver, of Petrolia, Ontario, left recently for Trinidad, British West Indies, where he has taken a three-year drilling contract.

* * *

Fred Hayes, with the National Transit Pump & Machine Company, Oil City, Pa., is returning from a visit to Europe and the Iraq field.

* * *

Leslie C. Case, chemist with the Gypsy Oil Company, Tulsa, left for his vacation the end of last week and will spend it in Missouri near St. Joseph.

* * *

L. E. Delcuze, assistant to the vice president of the Gulf Production Company, Houston, Tex., motored to Corpus Christi and the Rio Grande Valley for a 10-day vacation trip.

* * *

W. E. V. Abraham, of the geological staff of the Burmah Oil Company, Ltd., is on a visit to the oil fields of the United States investigating geological and production problems.

* * *

Jack E. Boddy, assistant to the sales manager, Wheeling Corrugating Company, Wheeling, W. Va., and J. P. Byrne, Kansas City representative of the same organization, were in Tulsa recently.

* * *

A. Ditson, special representative of the New York Rubber Corporation, has established headquarters in Tulsa. Mr. Ditson was formerly purchasing agent of the Bridgeport Machine Company, Wichita, Kans.

* * *

Kent B. Diehl, field engineer of the Dewey Portland Cement Company, Kansas City, accompanied by H. E. Brooks, local representative, visited recently in Tulsa, returning from a trip through the Southwest.

* * *

C. H. Bickell, general purchasing agent, Tide Water Associated Oil Company, New York City, was a recent visitor at the Tulsa offices. Accompanied by P. W. Fenton, purchasing agent, Tide Water Oil Company, a trip was made through the East Texas fields.

* * *

Luis E. Kemnitzer has returned from Germany after acting for more than two years as geologist for the Cities Service Company in that country. He will enter upon a period of private research at the California Institute of Technology making the subject of his studies the geology and oil and gas resources of the islands off the coast of southern California.

* * *

While in Tulsa last week George S. Buchanan, Wichita, Kans., geologist for the Standard Oil Company of Kansas, received news that Mrs. Buchanan's mother, Mrs. Francis H. Dodds, had died in her home in Mount Pleasant, Mich. He left at once for Mount Pleasant, going as far as Chicago by airplane. Mrs. Buchanan was visiting her mother at the time of the latter's death.

* * *

J. G. Farquhar, of Pittsburgh, Pa., has been elected president of the Big Lake Oil Company, succeeding the late Levi Smith. J. C. Trees, of Pittsburgh, was elected a director and chairman of the board; W. E. Huston, Pittsburgh, was elected treasurer, succeeding Mr. Farquhar, and Charles E. Beyer, Texon, Tex., who has been general manager and assistant to the president, was elected vice president in charge of field operations.

Dr. J. A. L. Henderson, consulting petroleum engineer, of London, is spending the summer and autumn in Canada.

* * *

Guy B. Shirley, landman for the Stanolind Oil & Gas Company, has been transferred from Tyler to San Antonio, Tex.

* * *

A. D. Sloan of the Sinclair Prairie Pipe Line Company, which is moving its offices from Troup, Eastland and Dallas to Fort Worth, Tex., will be in charge at Fort Worth.

* * *

M. H. Lowrance, in the land department of the Sinclair Prairie Oil Company, formerly located at Tyler, Tex., and Enid, Okla., is in Houston, Tex., on company business.

* * *

Frank C. Greene, consulting geologist of Tulsa is in the service of the Missouri Geological Survey in northwestern Missouri this summer and making his headquarters at Kansas City, Mo. He recently made a trip by air to New Mexico to examine a structure there.

Men of the Industry

W. T. DOHERTY

W. T. Doherty, recently made head of the Gulf Coast division of petroleum engineering of the Humble Oil & Refining Company, Houston, Tex., takes the position formerly held by G. B. Corless, now division superintendent for the Gulf Coast.

Mr. Doherty for several years has been in charge of chemical engineering work for the engineering department. He has been with Humble Oil & Refining Company in various capacities for 10 years, starting in the refining department at the Baytown plant. At Baytown he had diversified experience for four years, and then was transferred to the marketing department in Houston for a year and a half in connection with the sale of an oil treating chemical developed by the company. Because of his experience and knowledge of treating which he gained in handling that chemical, he then was placed in the production engineering department having charge of treating. Since then his work gradually has been extended to include all chemical engineering

Mr. Doherty is a graduate of Texas A. and M. College, where he specialized in chemical engineering. He is a native of Houston.

Robert Bruce White, of the Standard Oil Development Company, is in Tulsa for a few days.

* * *

F. E. Bernsen, manager, Lucey Products Sales Corporation, left last week on a business trip to Van Alstyne, Tex.

* * *

J. W. Shields, purchasing agent, Pure Oil Company, has gone on a vacation trip to old home surroundings in northern Illinois.

* * *

Harry N. Isenberg, of Los Angeles, Calif., was in Casper, Wyo., on business connected with his holdings in Salt Creek and other Wyoming oil fields.

* * *

Robert McCoy, Jr., sales manager, Frick-Reid Supply Corporation, is making an extended trip through the West Texas and Gulf Coastal fields.

* * *

M. L. Norris, former purchasing agent of the Independent Oil & Gas Company, Tulsa, is now located in Denver, Colo., as a representative of Butler Manufacturing Company.

* * *

Wilmer C. Swartley, sales manager, Philadelphia Steel & Iron Company, Philadelphia, Pa., manufacturers of forged steel balls, flanges, etc., stopped off in Tulsa en route to the Pacific Coast oil fields.

* * *

Rear Admiral W. C. Cole, U. S. Navy, has been made inspector of navy petroleum reserves in California. His chief aid will be Capt. H. A. Stuart, now en route from Pearl Harbor, Hawaii, islands to California.

* * *

Paul Vaudoit, who has been chief exploration engineer for the Shell Petroleum Corporation, Gulf Coast division, has left Houston, Tex., accompanied by Mrs. Vaudoit, for an indefinite stay at The Hague, Holland.

* * *

James A. Tong, who has returned to Maracaibo, Venezuela, from field work in the State of Falcon, is preparing a general report on the petroleum geology of Venezuela. He is geologist for the Standard Oil Company of New York.

* * *

R. G. De La Mater, engineering department, the Parkersburg Rig & Reel Company, Parkersburg, W. Va., was in Tulsa last week completing a rather extended trip through the Gulf Coast, Texas, Oklahoma and Kansas territory in the interests of his company.

* * *

Harold M. Wall, vice president in charge of mills, Wall Rope Works, Inc., New York City, spent two weeks recently visiting Tulsa and other points in the Southwest, calling on distributors. He was accompanied by J. L. Dittman, Mid-Continent representative.

* * *

Harry H. Smith, secretary, Mid-Continent Oil and Gas Association, Tulsa, has been confined to his home since July 9 because of a heart attack suffered on that date. It is reported that he is well on the way to recovery and is expected to be back at his desk very soon.

* * *

H. E. Hamilton, formerly general sales manager of the Oil Well Supply Company, Oil City, Pa., has moved to Fort Worth, Tex., and is district manager of the new Texas-New Mexico district which has been opened by the Titusville Iron Works Company of Titusville, Pa. Offices at Fort Worth are at 504 Holmes Building.

* * *

Mr. and Mrs. James C. Donnell, II, who were married July 2 at Ogden, Utah, sailed from New York on the Ile de France for a three months' tour of Europe. Upon their return, Mr. Donnell, who was a graduate from Princeton University in June, will become associated with the Ohio Oil Company, of which his father, Otto D. Donnell, is president.

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NATURAL GAS DEVELOPMENTS

Kansas Rates Reduced by State Commission

TOPEKA, Kans., July 25.—The Public Service Commission has ruled that 29.5 cents a thousand feet is a "reasonable" city gate rate to be charged local distributing companies by the Cities Service Gas Co., instead of the present average price of 39.5 cents for main line domestic gas maintained by the concern.

The commission was divided, Commissioners Thurman Hill and Charles W. Campbell fixing the rate at 29.5 cents, while Chairman J. W. Greenleaf in a dissenting opinion said 32 cents would be a "fair and reasonable" price.

The investigation was ordered by the commission July 2, 1931, after Gov. Harry H. Woodring failed in attempts to negotiate a voluntary 10-cent reduction in the gas rate.

Cities Service Gas Co. is a pipe line unit in the Cities Service Co.'s organization, which through subsidiary distributing companies supplies natural gas to 100,000 customers in 100 cities and communities in Kansas and wholesales the fuel to 29 additional cities and communities in the State.

Chairman Greenleaf said the commission in its formal order would specify the benefits of its findings for the reduced gas rate charge should be passed on by distributing companies to the consumers.

Commissioner Hill said the distributing companies "probably" would be ordered to make the reductions effective with August 1 bills and that they would be given 30 days to show cause why the proposed rate should not be continued in effect.

Most of the majority opinion of the commission was devoted to analysis of valuation figures. The commission found the average value of Cities Service Gas Co. properties over two annual periods, ended December 31, 1930, and June 30, 1931, to be $66,484,829, and the average net income of the company available for return during the same periods to be $7,161,793, which, it was said, provided an average return earned during the two annual periods of 10.7 per cent.

"The commission is of the opinion," it held, "that a net return of approximately 11 per cent is unreasonable at the present time, and was unreasonable during the periods covered by the investigation.

"It is the opinion of the commission that no company dealing at arms length with an independent company should expect to enter into a contract under conditions such as existed during 1930 and 1931, or up to the present time, by which they would make a net return of 10.7 per cent in a gas pipe line business."

Seven per cent was held by the commission to be the maximum rate of return to be used by the regulatory body in determining the reasonableness of the gate rate contract. If the gate rate were reduced to 29.5 cents, the commission held, the company would "still be making $407,910 in excess of a fair rate or return of 7 per cent on the average value of the property."

The valuation figure was approximately $23,000,000 under the figure claimed by Cities Service, exclusive of gas reserves.

Cities Service, through its own distributing system, supplies gas through 100,000 meters in 100 cities and communities in Kansas. In addition, it wholesales gas to 29 additional cities and communities in the State.

Counsel for various subsidiaries of the Cities Service Co. operating in Kansas announced court action would be instituted in an attempt to prevent the cut in natural gas rates ordered by the State Public Service Commission.

First, the companies will ask a rehearing before the commission.

Robert D. Garver, attorney for the companies, assailed the commission's decision as a "political" one and asserted it was not based on the evidence taken.

The commission ordered 12 Cities Service Co. subsidiary distributing concerns to make reductions in their gas rates August 1. The companies were instructed to pass on to the consumers the savings from a cut of 10 cents per 1,000 feet ordered in the pipe line rates of the Cities Service Gas Co. and the elimination of a management fee of 1¾ per cent of the gross revenues paid to Henry L. Doherty & Co.

Mr. Garver declared the commission's attack on the management fee showed "animus" and added the supreme court of Kansas and the Federal district court had approved the charge for management.

Natural Gas Franchise to Supply Payette, Idaho

CASPER, Wyo., July 25.—Franchise to furnish the town of Payette in western Idaho with natural gas has been granted to the Idaho Gas & Utilities Corp. which took over part of the holdings of Louis Lilly and associates on Crystal Dome. This company was organized several months ago by C. E. Bivens and others of Denver. The company has a well on Crystal Dome in NE SE, Section 1-8n-5w, in which gas was found in three different sands, the total depth being 1,932 feet. This well is standing capped with an estimated shut-in production of 1,500,000 feet of gas.

The franchise was granted over the protest of Boise Petroleum Co. which is drilling a test on the Keine tract in Section 13-8n-4w, and also claims to have some gas. The Boise Petroleum Co. asked that the field be left open at Payette to permit the first group supplying adequate gas to have the franchise.

By the terms of the franchise, the Idaho Gas & Utilities Corp. must have gas developed in commercial quantities by October 1, and have it piped for service in Payette by January 1, 1933 or forfeit the franchise. The Bivens well is 2 miles east of Payette and the Boise well is 8 miles east.

CARBON BLACK PLANT PERMIT

AUSTIN, Tex., July 25.—The Magnolia Petroleum Co. has been granted a permit by the Texas Railroad Commission to operate a carbon black plant in Wheeler County. The plant was authorized to use residue casinghead gas from Wheeler County wells. It was estimated the plant would use approximately 4,000,000 feet daily.

Action on the request of the same company for permit to operate a carbon black plant at Pampa was held in abeyance pending an investigation to determine if the gas which would be used was from oil or gas wells.

UNION GAS CHAIRMAN

CHATHAM, Ontario, July 23.—At the recent annual meeting of the Union Gas Co. of Chatham, provision was made for the creation of a new office, that of chairman of the board of directors, who will preside at meetings of the directors, of the executive committee and at shareholders meetings. The directors subsequently elected G. R. Cottrelle, for some time past a director, as chairman. Provision was also made for the appointment by the directors of three or more of their number as an executive committee.

Contract Made for Survey of Oklahoma Gas Lines

HOUSTON, Tex., July 25.—Ernest O. Thompson of Amarillo, member of the Texas Railroad Commission, has announced that the Corporation Commission of Oklahoma has agreed to pay $5,000 and the Texas Railroad Commission $2,000 to obtain a valuation of the Oklahoma properties of the Lone Star Gas Co., which would enable Texas to fix the gate rate for all her cities within 40 days.

Mr. Thompson said that the Oklahoma Corporation Commission represented that it had at this time but $5,000 that it could devote to paying for an appraisal of the Oklahoma end of the Lone Star lines. The Texas Railroad Commission regarded the matter as so urgent that it immediately agreed to supply the remaining $2,000 necessary.

The firm of Hawley, Freeze & Nichols of Fort Worth, which made the appraisal of Lone Star properties in Texas, would be employed immediately to continue the work in Oklahoma, with a 30-day time limit applied. Within 10 days after the receipts of the report, the Texas Railroad Commission could fix the key or gate rate for all Texas cities served by the Lone Star Gas Co., Mr. Thompson said.

The Texas Railroad Commission had served notice upon the Oklahoma Corporation Commission that unless the Oklahoma appraisals were agreed upon within 10 days, the Texas Commission would make its own evaluation of the Lone Star's Oklahoma properties, and that in that event Oklahoma then could not have access to the Texas appraisal for use in Oklahoma.

TO SELL KANSAS PROPERTIES

TOPEKA, Kans., July 25.—The Kansas Communities Gas Co. has applied to the Public Service Commission for permission to sell to the Communities Public Service Co. the former's properties in St. Paul, Galesburg, Parsons, Savonburg and Chanute.

Carl V. Rice, its attorney, said Communities Public Service, an Arkansas corporation, was organized to take over properties of the other concern and also those of General Utilities Co., now in receivership and operating in approximately 20 Kansas towns.

Communities Public Service also asked permission to issue $350,000 common stock, of which $250,000, Rice said, was to be used for purchase of Kansas properties.

JOS. McKEE TRANSFERRED

CHATHAM, Ontario, July 23.—Joseph McKee, for many years with the staff of the Union Gas Co. at Chatham, has been transferred to the staff of United Fuel Investments, Ltd., at Hamilton, Ontario. Mr. McKee entered the employ of the old Volcanic Oil & Gas Co. under B. F. Dowd in 1912 and continued with the Union Natural Gas Co., being appointed assistant secretary in 1923 and secretary in 1928. He is assistant secretary and assistent treasurer of the Natural Gas and Petroleum Association of Canada. Before his departure the Chatham officers and staff presented Mr. McKee with an oil painting.

WEST VIRGINIA DECLINE

Production of natural gas in West Virginia dropped off 17,302,000,000 feet in 1931, as compared with the output in 1930. The output in 1931 totaled 123,283,000,000 feet. The decline in production, it is believed, does not indicate the exhaustion of any of the fields, but is due to business conditions.

Natural Gas Sales Decline General Outside California

Manufactured and natural gas utilities had total gross revenues of $52,065,947 in May, against $57,020,099 in the like month a year ago, a decline of 8.7 per cent, according to the American Gas Association.

During the first five months of this year's revenues from 413 companies serving 14,079,628 customers and representing 90 per cent of all public utility distribution of gas, amounted to $300,806,952, which was 7.1 per cent under the $323,895,370 in the corresponding period of 1931.

For May the natural gas utilities reported revenues of $20,282,226, a decline of 13.2 per cent. For the first five months gas revenues dropped 9.5 per cent. Natural gas utility sales for the month were 48,320,480,000 feet, a drop of 15.6 per cent.

The decline in natural gas sales in May was the severest shown this year and was due to a contraction in all classes of sales. The drop in natural gas sales was general throughout the country with the exception of California, where an increase of 21 per cent in domestic sales and 62 per cent in commercial sales offset declines in industrial sales and resulted in an increase of 1.4 per cent in total natural gas sales. Revenues of natural gas companies in California show an increase of 12 per cent for May and 15 per cent for the first five months.

Colorado Interstate Files Answer to Commission

DENVER, Colo., July 25.—Reply has been filed by Colorado Interstate Gas Co. with the Colorado public utilities commission, denying it is a public utility. The commission ordered the company to show cause why it should not be forbidden to engage in intrastate commerce and forced to obtain a permit as a public utility. The company is the owner of the gas line which brings gas from the Amarillo district in Texas to Colorado. The Colorado-New Mexico Coal Operators Association filed a brief recently, signifying its intention of intervening in the case to uphold the contention of the commission that the gas company is engaged in intrastate commerce. It has been given until August 1 to file a brief.

The Colorado Interstate Co.'s brief denies the company is engaged in distributing and selling natural gas in intrastate commerce and declared it does not distribute gas locally to the public.

MEXICO, MO., FRANCHISE

MEXICO, Mo., July 25.—The Mexico city council is deadlocked on a 14-year natural gas franchise ordinance which provides for a city-wide election to vote for or against a franchise to the Missouri Power & Light Co.

The eight councilmen are divided, four for the franchise vote and four against it. On the first two readings, Mayor R. W. Berrey voted to advance the ordinance, though he is opposed to a franchise grant. He voted for the ordinance, however, saying the responsibility should be with the voters to approve or reject the franchise.

CITY TO KEEP GAS LIGHTS

The city commissioners of Kansas City, Kans., have decided to delay indefinitely the ordinance requiring the abandonment of the remaining gas street lights for electricity. An investigation has shown that the cost of the change might increase the tax levy, the commissioners said.

ARE YOUR CORRECTIONS *CORRECT?*

● When you make a correction for temperature the correction is not correct unless the temperature reading is CORRECT.

● Extreme accuracy of Gas Temperature Measurement is obtainable with the Foxboro ANTI-AMBI Thermometer.

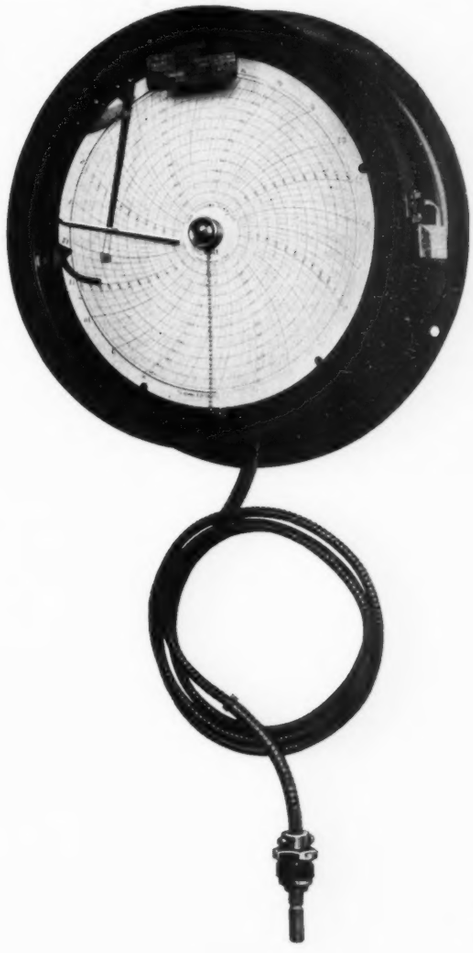
● This new, fully-compensated Recording Thermometer gives TRUE TEMPERATURES—day and night—summer and winter—under extreme heat and cold.

● Its readings are NOT affected by ambient temperature (i.e., temperature surrounding the case and tubing).

● The small sensitive bulb makes it adaptable to any size gas line. Pipe wall temperatures do not reach the sensitive position of the bulb—it is protected by a stainless extension on the bulb and a special fin type socket.

● Anti-Ambi Thermometers should be used for all gas temperature measurement below 250° F., where extreme accuracy is required. It is the most *accurate* thermometer on the market that is rugged enough for gas line work.

ANTI-AMBI



WRITE TODAY FOR BULLETIN 178 J

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THE COMPASS OF INDUSTRY

Instruments for Controlling, Recording and Indicating Temperature, Flow, Level and Pressure

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

TWO WELLS BETTER THAN ONE

In such literature as I have read on the subject of well spacing I have found nothing that made it clear whether you can get the most oil out of the ground by limiting the number of wells within a given area, say 40 acres, or by drilling the ground full of holes. This is a matter of importance because if the owner of a property is under no kind of pressure that compels him to get all the oil to the surface in the shortest possible time he, of course, can effect enormous savings, especially in deep sand areas, by keeping down the number of wells. I would be glad to get some information on this point.—E. I. S.

It may be set down as a generally accepted fact that the greater the number of wells in a given area the greater will be the quantity of oil produced. It does not follow from this, however, that "drilling the ground full of holes," to quote your words, would be advisable from any point of view. Dr. W. P. Haseman says, in a discussion of this subject:

"It is well known that two wells drilled to each 160-acre tract in an oil pool and so spaced as to set up a drainage area of 80 acres per well will produce more oil from the tract than will a spacing of wells with a drainage area of 160 acres per well. In fact the smaller the drainage area per well the greater the ultimate production from a given tract. This fact is unmistakably and unquestionably verified by field data published in Reports of Investigations, Serial No. 2,270, August, 1921, U. S. Bureau of Mines, and in various articles in trade journals. One record from the Bureau of Mines report is given below as typical and representative of the relation between drainage area and ultimate production of oil from a tract:

Table 1

Drainage area in acres per well—	Acreage yield
15	987
10	1,420
7	2,000
5	2,260
3	3,250

"It is assumed that within reasonable limits the wells of the tracts were drilled simultaneously and produced similarly and simultaneously throughout the most active part of their lives. The greatest ultimate acreage yield from the rock reservoir underlying the above tracts through wells without the introduction of external energy would be around 5,000 bbls. per acre with the drainage area approaching zero acres per well. Furthermore, the following yields per acre are indicated:

Table 2

Drainage area in acres per well—	Acreage yield	Per cent increase
80	218	....
40	425	95.0
20	810	90.6
10	1,460	81.2
5	2,340	60.2
2.5	3,300	41.4
1.25	4,000	21.3

"The third column in Table 2 gives the increased per cent in yield per acre of oil from the given tract by halving the drainage area per well and the wells being produced similarly and simultaneously. For example, a tract having a spacing of wells with a drainage area of 10 acres per well will yield 81 per cent more oil than with a drainage area of 20 acres per well; 171 per cent more than with a drainage area of 40 acres per well; and 266 per cent more than with a drainage area of 80 acres per well."

HOW MUCH IS A FOURBLE?

I would appreciate it very much if you would advise me as to the meaning of the word "fourble" as used in reporting the size of oil wells in the Southwest, particularly as to how the size in fourbles compares with the size in barrels.—E. N. L.

You are not the only person bothered by the use of the term "fourble" in oil scout reports and there is a growing feeling that a more definite way of expressing a well's probable productivity might well be substituted. Although the word is in common use among scouts in rotary drilled fields, it usually conveys little more information than the mere fact that oil has been found in the well under consideration.

As you probably know, the words "trible" and "fourble" have come into use in connection with rotary drilling, signifying the number of joints of drill pipe pulled from or run into a well at one time. A trible is three joints and a fourble four. A fourble is roughly referred to as about 90 feet long. You probably know too that it is common practice to use a sand tester when it is desired to test the fluid content of a rotary drilled well without running pipe.

As the drill pipe is removed from the well and unscrewed in making a sand test a check is made for the first appearance of fluid inside the string. Let us suppose that the fluid does not appear until the one hundred and eighth joint of pipe from the bottom is unscrewed. Dividing 108 by 4, the oil scout would report that the well tested 27 fourbles of oil and he would give the time during which the tester was open at the bottom of the hole to permit the fluid to enter the drill pipe.

The quantity of oil entrapped inside the drill pipe varies with the weight and size of the pipe and unless these details are known the report in fourbles offers no definite measure in terms of barrels. If use of the sand tester indicates to the operator that his well is likely to be commercially productive of oil and gas, he will set casing and complete the hole in the regular manner. Not until the oil begins to flow into a tank is an accurate gauge made.

By a little calculation it is possible to reach a closer estimate of a well's probable capacity from a scout's "fourble" report, than is indicated here, though at best it is too vague to be satisfactory. If we know the inside diameter of the drill pipe to be 4 inches, then it will hold about .6528 of a gallon or 231 cubic inches for each foot of length. With the fourbles estimated at 90 feet each and 27 of them full of oil, there would be 2,430 feet of oil in the hole. This would equal 1,586.22 gallons, or about 37.5 bbls. of 42 gallons each. But without actual knowledge of the exact size of the drill pipe used it can be seen that only a rough approximation of the fluid content is possible.

Why Was It Called That?

JUMBO

"Jumbo" was the name given to the second gas well drilled in 1885 by Samuel Speechley on his farm 7 miles east of Oil City, Pa., and producing from the Speechley sand. It was the marvel of its day. The flow was sufficient for a time to supply Oil City, Franklin and Titusville with all the gas they required.

The name Jumbo was applied because the well was a big one. But how did Jumbo come to mean big? Few boys of this generation could say, but the man whose memory carries him back to circus-going days of the eighties knows. Jumbo was an elephant bought by P. T. Barnum from the London Zoological Gardens and proclaimed on flaming posters as the most colossal animal in captivity. "Jumbo's ears are as big as parlor doors" was one modest assertion. Jumbo was a subject of wide and wondering discussion, sedulously nurtured by the famous showman, and it became a common practice to refer to almost anything of great size as a Jumbo.

COMPUTING RESERVES OF GAS

Can you tell me where I can get a table to compute the probable quantity of gas a well will still produce, figuring the original rock pressure and the rock pressure still left in the well and taking into consideration the quantity of gas the well has produced?—J. C. R.

This department does not know of any table for this purpose, but below is the formula usually employed. It was provided in answer to your question by the U. S. Bureau of Mines.

$$Q = \frac{V}{14.4}(P_1 - P_2)$$

Q is the quantity of gas produced during a decrease in rock pressures from P_1 to P_2.

V is the actual volume of the reservoir in cubic feet at atmospheric pressure of 14.4 pounds per square inch.

P_1 is the original rock pressure, pounds per square inch absolute.

P_2 is the present rock pressure, pounds per square inch absolute.

For an application of this formula we refer you to the May 14, 1931, issue of The Oil and Gas Journal, page 82, where you will find an answer to a question somewhat like yours but dealing with definite factors.

The U. S. Bureau of Mines has published technical papers on gas measurement and they can be obtained from the Government Printing Office, Washington, D. C. You may also find Diehl's "Natural Gas Handbook" published by Metric Metal Works, Erie, Pa., of interest.

STARTING A SUNDAY SHUTDOWN

There is a good deal of talk in this district of starting a Sunday shutdown like the one which I understand is in effect in some of the Texas fields. Could you tell me how the operators in any district go to work to put such a weekly shutdown into effect? Has this plan of curtailing production been endorsed by any of the important organizations of oil men?—F. L. D.

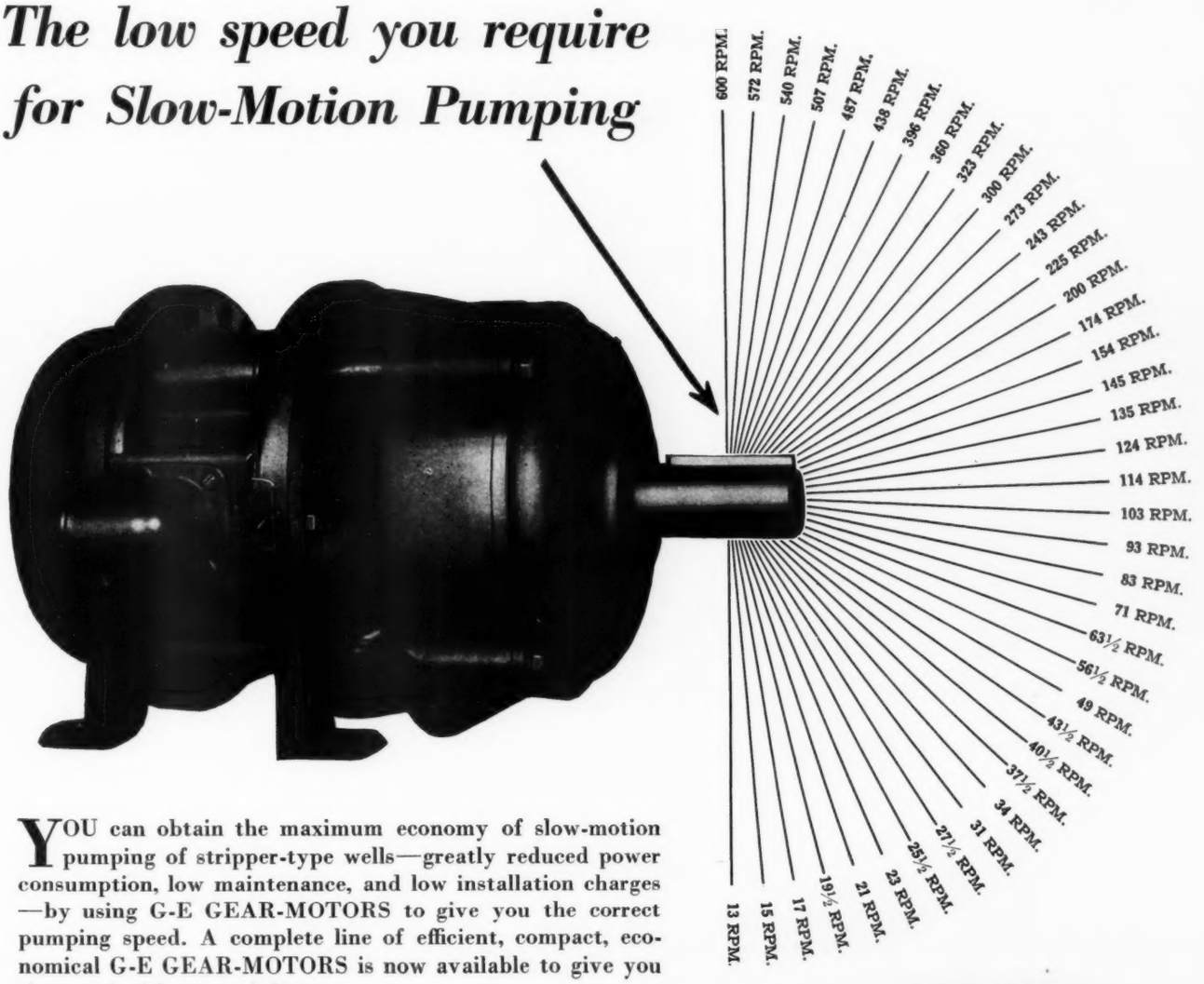
The essential requirements in putting a Sunday shutdown into operation are unanimity among the operators as to the benefits of such a step, formal adoption of an agreement to observe the shutdown and then faithfully adhering to the agreement.

This method of restricting production is approved by leaders in the oil industry. As for the approval of important organizations of oil men, there is at hand the following resolution adopted by the Texas division of the Mid-Continent Oil and Gas Association:

"Whereas, numerous producers of crude oil in the promotion of conservation and providing employment for the greatest number of men, without the burden falling on any district or group, have voluntarily put into execution the Sunday closing of all wells, or where conditions necessitate continuous operation reducing runs by one-seventh, now, therefore, be it resolved by the Texas division of the Mid-Continent Oil and Gas Association that it commends this action as being fair to both the large and small operator alike. And be it further resolved, that the operators over the state be urged to so operate their properties that it may not be necessary to shut down and in many instances abandon wells whose production would be forever lost as well as throwing hundreds of oil field workers out of employment."

G-E GEAR-MOTORS

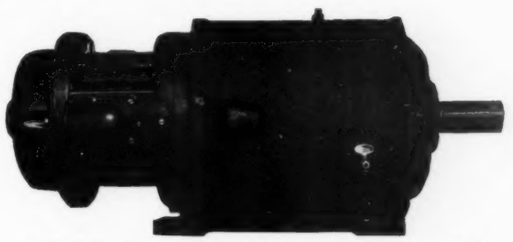
The low speed you require for Slow-Motion Pumping



YOU can obtain the maximum economy of slow-motion pumping of stripper-type wells—greatly reduced power consumption, low maintenance, and low installation charges—by using G-E GEAR-MOTORS to give you the correct pumping speed. A complete line of efficient, compact, economical G-E GEAR-MOTORS is now available to give you the required low speed direct.

The G-E GEAR-MOTOR combines the advantages of a normal-speed motor and efficient, internal, helical gearing, built into a single, compact unit that delivers the full rated horsepower of the motor at the output shaft. This single unit is easily handled and economically installed. Totally enclosed, accurately cut gears, bathed in oil, contribute to low maintenance and long life.

G-E GEAR-MOTORS are available in a wide range of motor ratings and speed ratios, in polyphase, single-phase, and direct-current types. Complete information can be obtained from the nearest G-E sales office or G-E Motor Dealer, or from General Electric Company, Schenectady, New York.



G-E gear-motor, typical of designs for very low speeds

STANDARD 3-PHASE RATINGS

3/4 to 75 hp., 600 to 13 rpm.

Other speeds and horsepower ratings can be furnished on request. Speed adjustment can be obtained by selecting a motor with the necessary electrical characteristics.

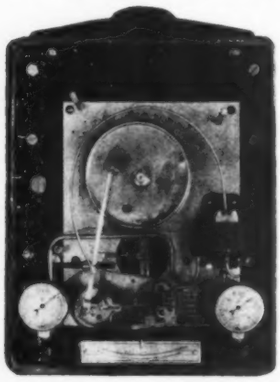
201-231A

GENERAL ELECTRIC

NEW AND IMPROVED EQUIPMENT

New Flow Instruments Are Fully Compensated

The Neilan Co., Ltd., 641 Santa Fe Avenue, Los Angeles, Calif., manufacturer of automatic control equipment, announces an improved line of flow control instruments which are fully compensated. This is accomplished by the Neilan volupressure compensator which smoothes out



pulsations without loss in sensitivity. Due to this simplified compensator, it is an easy matter for the average plant operator to obtain any degree of compensation that is required.

Another feature is the ease with which the flow controllers may be changed from one differential range to another. The high and low pressure mercury pots have been replaced by two concentric stainless steel cylindrical tubes. New differential ranges can be obtained readily by inserting new cylindrical tubes of the proper diameter. This provides conversion at a minimum expense while the stainless steel eliminates the possibility of inaccuracy due to corrosion.

Mechanical System of Lubrication Perfected

The Hills-McCanna Co., 2349 Nelson Street, Chicago, has developed a system for the mechanical application of light greases and heavy oils to points requiring regular lubrication. This system completes the company's line of equipment for lubricating any type of machinery that requires regular amounts of oils and greases. It is a single-line system. The main unit is placed in a convenient location and a single feeder line is taken to the farthest point requiring lubrication. Branch lines then are taken from the main line to each bearing. No return line is required. An independent mechanical measuring unit is placed at each bearing.

The measuring valve allows only the amount of grease it is set for to be fed to the bearing, and then acts as a shut-off valve, preventing any more lubricant passing and being wasted. Regardless of the amount of pressure in the line only the amount the valve is set for can pass to the bearing. There is visible evidence that the valve is operating. An added advantage is that the pressure is applied to the line only at the time the points are being lubricated. No air, spring or means other than a positive pump is used to accomplish delivery.

The system can be motor driven, mechanically operated, or operated by a hand crank. The type depends upon the service. Hoppers, valves, motors, etc., are made in sizes for a variety of services.

Among the Equipment Houses

H. C. Ramsey, vice president in charge of international business of Worthington Pump and Machinery Corp., sailed for Europe on the Majestic July 8 to spend 10 weeks studying conditions and visiting Worthington's manufacturing and sales organizations in England, France, Germany, Spain and other countries.

—

W. L. Todd, president of the Columbia Oil & Gas Co., Dallas, Tex., has made an arrangement with the Kontol Co. of Cincinnati, Ohio, whereby he becomes manager of Kontol's Dallas office. He will distribute Kontol, a chemical for the resolution of oil emulsions and said to be effective as a paraffin softener.

—

Dr. Webster N. Jones, general superintendent of the processing division of the B. F. Goodrich Co., Akron, Ohio, has resigned to become director of engineering of the Carnegie Institute of Technology, Pittsburgh, Pa.

The Babcock & Wilcox Co. has been granted the exclusive rights in the United States and Canada for the manufacture and sale of the automatic pressure circulating and indirect heating system of sulphite cooking developed by the Kimberly-Clark Corp.

—

W. G. Lane is on a business trip in the Mid-Continent looking toward distribution of the "ring" packer manufactured by the Lane-Wells Co. of Los Angeles.

—

The Titusville Iron Works Co., Titusville, Pa., has opened district offices at 504 Holmes Building, Fort Worth, Tex., from which New Mexico and Texas will be covered. H. E. Hamilton, formerly general sales manager of the Oil Well Supply Co., Oil City, Pa., will be manager of the new district. The company manufactures and distributes oil field boilers and engines and commercial boilers.

New A.P.I. Pull Rod Is Announced by "Oilwell"

The Oil Well Supply Co., Oil City, Pa., is marketing a new pull rod and clamp that are dimensioned exactly to the latest A.P.I. specifications. These A.P.I. rods are made of high tensile steel, with the ends carefully and accurately upset. The upset ends provide a greater cross section, and consequently greater strength and longer service.

The A.P.I. clamps are of steel and drop-forged. Because their minimum cross-sectional area is several times that of the rod body, the clamps are stronger than the rods. It is to be noted particularly that the bolts for the clamps strictly conform to A.P.I. requirements. The three-fourths-inch size has a 7/8"x 3½" bolt and the seven-eighths-inch size a 1"x3¾" bolt.

For still greater strength the upset ends are normalized. This pyrometer-controlled operation relieves all forging strains and refines the grain structure.

Toledo Announces Two Pipe Threading Tools

Improved Toledo 1-inch to 2-inch pipe threaders, announced by the Toledo Pipe Threading Machine Co., Toledo, Ohio, are similar to the standard No. 1 and No. 1A, except for the die head of new design and the new type pipe holder.

No bushings are needed with this new three-jaw pipe holder. The large wing-head thumb screws with micrometer line guide bars make this an easy and quick tool to center on the pipe. The three broad-faced chuck jaws hold the tool rigidly to the pipe, assuring clean cut, perfectly tapered threads that are straight on the pipe.

These tools are adapted for brass or copper as well as iron or steel pipe, as the broad-faced chuck jaws do not mar polished pipe. The large wing-head thumb screws are easy to tighten.

MOTORIZED SPEED REDUCER

A new motorized speed reducer has been added to the line of enclosed speed reducing units built by Link-Belt Co., Philadelphia, Pa.

A bulletin published by the Alloy Pump & Valve Co., 5713 Euclid Avenue, Cleveland, Ohio, is devoted to Alloy pumps, valves, fittings and castings.

Durkee Pump Jack Has Straight-Lift Feature

A new type of pump jack, the Durkee "Straight-Lift" has been developed by the Durkee Manufacturing Co. of Denver, Colo. Its greatest advantage is the straight lift which can be had and the full length of the stroke regardless of the length of stroke desired. Because of this straight lift the vibration on the polish rod and sucker rod is greatly lessened as well as the wear on the packing. Breakage of rod line and sucker rod is practically eliminated.

The length of the stroke is easily adjusted by lengthening or shortening the turnbuckle in the rod line. On the upper end of the stroke the pump jack moves slowly. This gives more time for discharging the load of oil. Since the rods start to return slowly, fluid hammer is reduced and longer life given to the rods.

This "Straight-Lift" pump jack is said to pull back more surface rod than the weight of the sucker rod in the well, without any extra weight on the jack. The pull rod is laid close to the ground, which makes for ease in installing, and is a great advantage on the lease.

The jack is manufactured by the Stearns Roger Manufacturing Co., Denver, and can be purchased through supply houses or direct from the Durkee Manufacturing Co. Detailed information regarding this jack is given in a bulletin which will be sent to anyone interested.

Ingersoll Introduces New Stainless Steel

The Ingersoll Steel & Disc Co. of Chicago (a division of the Borg-Warner Corp.) has perfected a two-ply stainless steel, the "Ingoclad," produced by a patented process from the composite ingot.

It is stated that the manufacturing process has been developed to the point where a perfect bond between the stainless steel and the carbon steel back is assured. Ingoclad stainless steel is being produced at the New Castle, Ind., plant of the company. It is expected to find many applications in the oil industry where corrosion problems are frequent. It is said that pump parts, drill machinery, steel linings, tank car linings, etc., offer uses for this new stainless steel.

Beaver Power Adapter Introduced by Borden

The Beaver power adapter, announced by the Borden Co., Warren, Ohio, is described as a worm-driven die stock using interchangeable die-heads to thread all sizes and kinds of pipe from one-half to 2-inch. It is operated by means of a three-fourths-inch heavy-duty electric

drill. A compressed-air drill may be used if desired.

With the Beaver power adapter it is possible to thread pipe up to 2-inch by power with hand tools. The workman can take it with him anywhere, and one man can handle it. It is of aluminum alloy construction. The power adapter weighs 17½ pounds. On the rear it has a self-centering chuck to hold it squarely and firmly on the pipe. On top is a convenient grip for easy handling. The double-ended drive enables the operator to cut right or left-hand threads or to back-off by power. A driving socket to fit electric or air drill chuck is supplied with each adapter. One man can operate and apply oil to the dies at the same time.

Grader Equipped With Seven Control Levers

The "Caterpillar" Sixty grader, equipped with power controls, has been introduced by the Caterpillar Tractor Co., Peoria, Ill. There are seven levers in a row in front of the operator. Each lever controls action in one direction when pushed forward, in the opposite direction when pulled back. Five of the levers control the most frequently made adjustments. The sixth, through a shift, controls either the center shift or three-point control. The seventh, through a shift, controls either the lean of the two rear wheels or the side shift of the rear axle.

The control levers engage sliding jaw clutches to direct the power, transmitted through the constantly operating gears to the various points of action. Turns are made quickly and easily. Power to operate the power controls is provided by the engine mounted on the grader.

NEW GEAR-MOTORS ANNOUNCED

A line of gear-motors, readily adaptable for application to machinery of various designs, has been announced by the General Electric Co. The underlying principle consists of a normal speed motor in combination with a builtin, internal helical planetary gear speed reducer. Since this type of construction permits a wide choice of speeds on the output shaft, it is possible to adapt a gear-motor to almost every type of low speed drive. Compact construction, high efficiency, full horsepower rating of the motor at the output shaft, economy of installation and operation because of the self contained unit, and simple design are some of the features of these gear-motors, which are available in either flanged or vertical mountings. The General Electric Co. also offers gear-motors with special electrical characteristics, such as high starting torque with low starting current, normal starting torque with low starting current, adjustable, varying speed, multispeed, etc.

WASHINGTON

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Oil and Gas

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SUNBURST
SHELBY
CHINOOK
GREAT FALLS
WINNETT
BUTTE
MILES CITY
BILLINGS
ELK BASIN
CODY
BASIN
THERMOPOLIS
LANDER
CASPER
LUSK
EVANSTON
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SALT LAKE CITY
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CRAIG
FT COLLINS
BOULDER
FT MORGAN
WRAY
DENVER
GRAND JUNCTION
COLORADO SPRINGS
MONTICELLO
PUEBLO
LA JUNIA
AZTEC
HUGOTON
GALLUP
ALBUQUERQUE
AMARILLO
HOENIX

The Oil and Gas Journal's Map

of

Oil and Gas Pools in the United States and Canad

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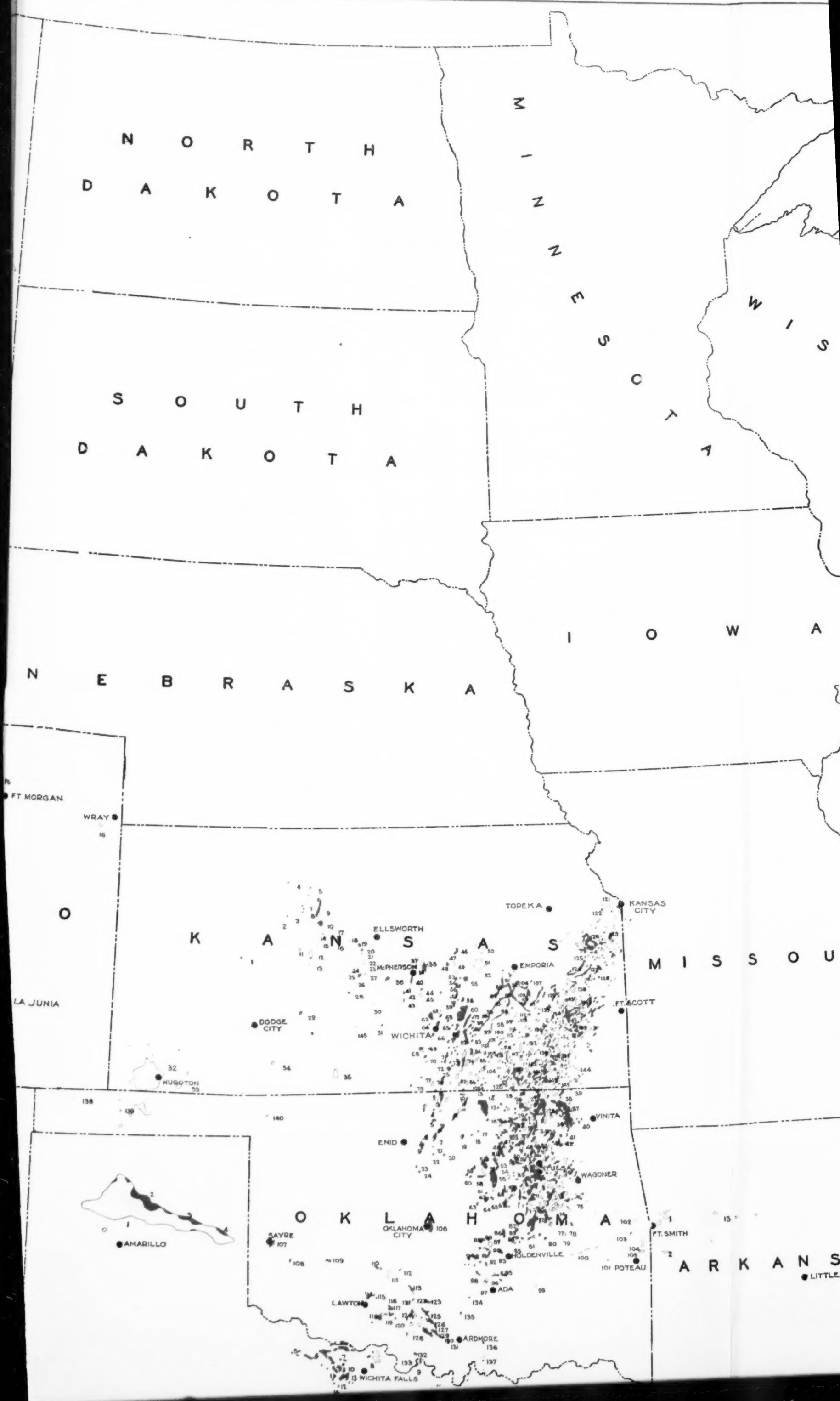

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MICHIGAN
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ILLINOIS
INDIANA
OHIO
KENTUCKY
TENNESSEE
WEST VIRGINIA
PENNSYLVANIA
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
MISSISSIPPI
ALABAMA

MT PLEASANT
GRAND RAPIDS
PORT HURON
DETROIT
STRATFORD
HAMILTON
BUFFALO
CHICAGO
VALPARAISO
TOLEDO
CLEVELAND
YOUNGSTOWN
WARREN
MANSFIELD
PITTSBURGH
PEORIA
McCOMB
MUNCIE
WHEELING
UNIONTOWN
COLUMBUS
INDIANAPOLIS
CHILLICOTHE
CINCINNATI
NEWTON
VERNON
ST LOUIS
PRINCETON
LOUISVILLE
LEXINGTON
MURPHYSBORO
HAZARD
BROWNSVILLE
NASHVILLE
CHARLESTON

Map

Canada

Oklahoma.
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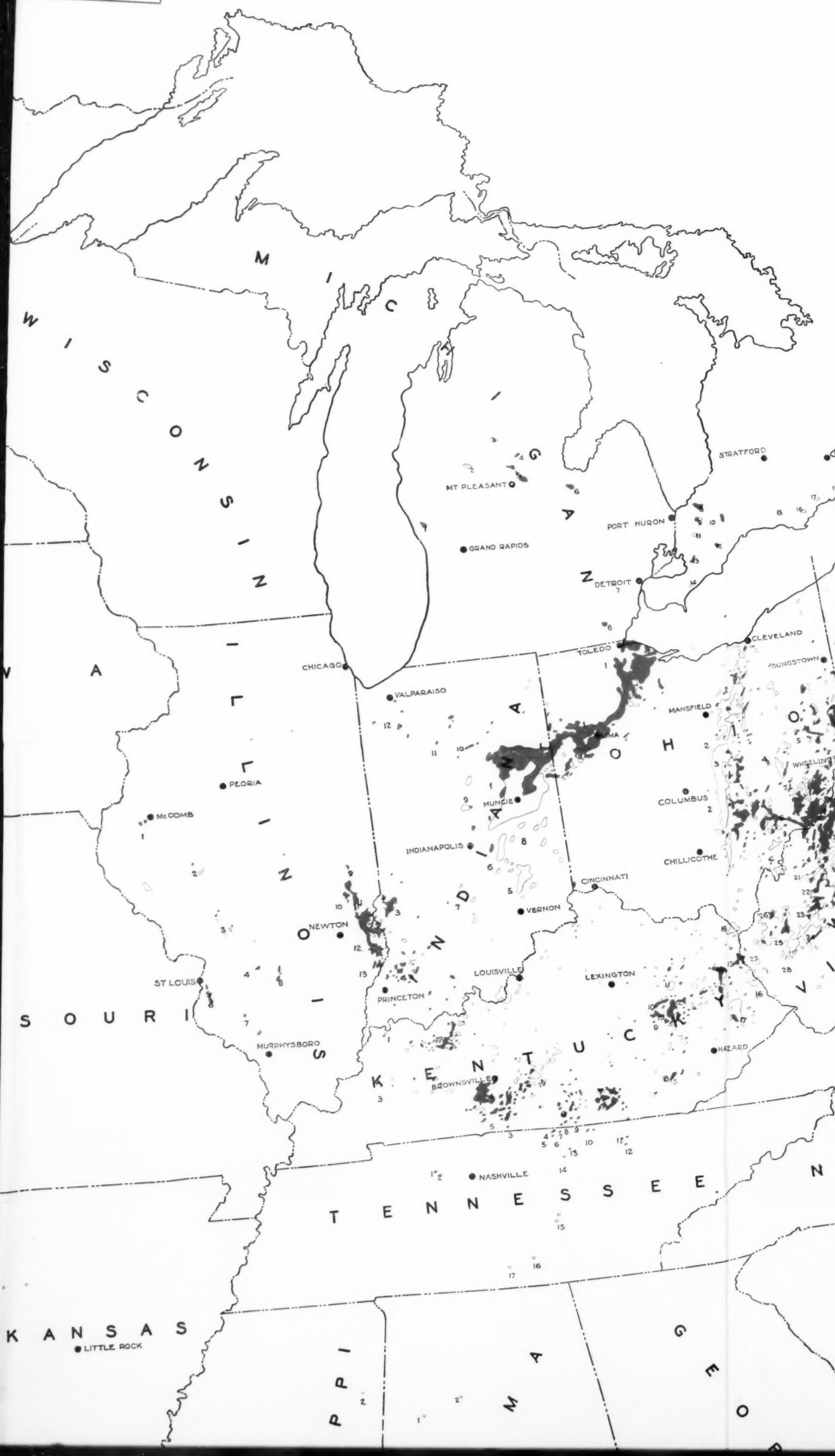

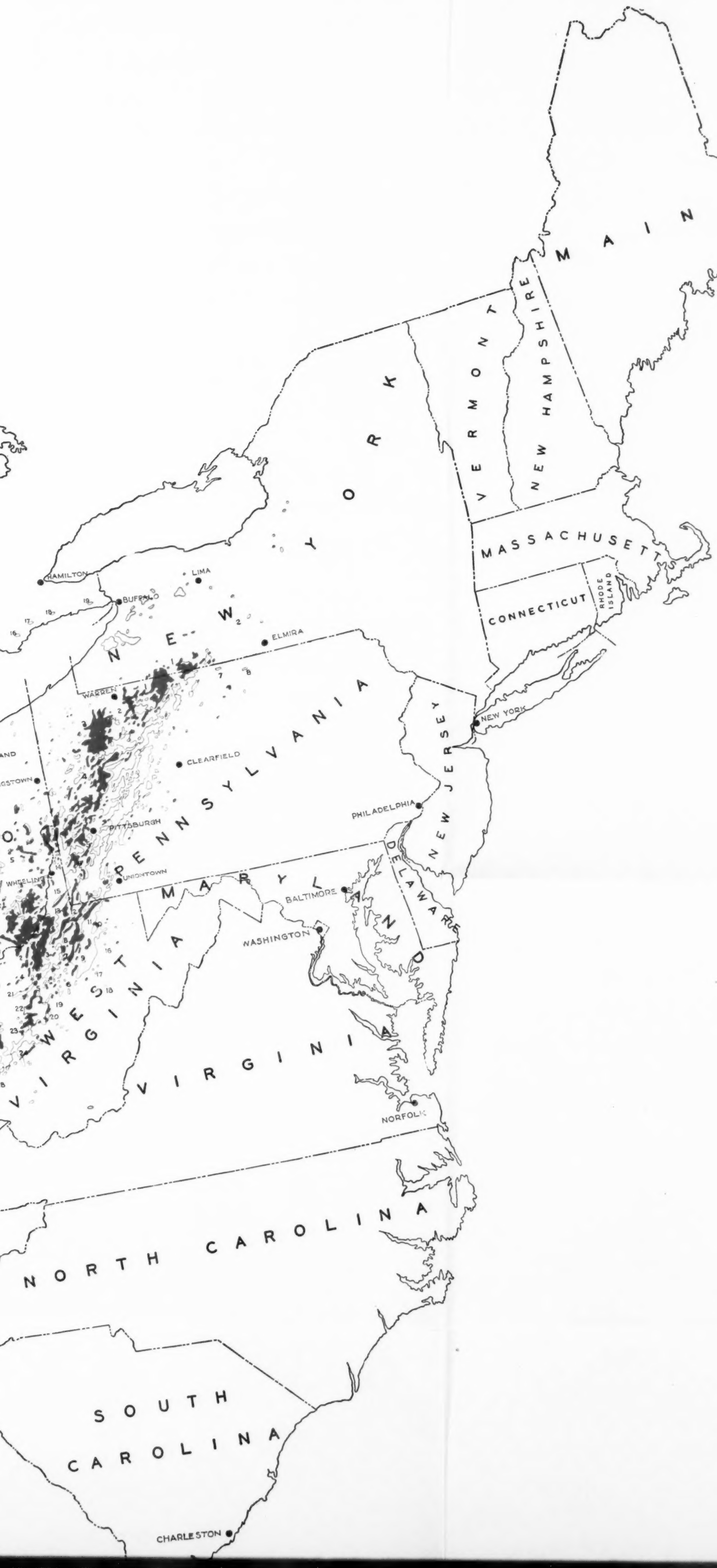
MAINE
VERMONT
NEW HAMPSHIRE
NEW YORK
MASSACHUSETTS
CONNECTICUT
RHODE ISLAND
NEW JERSEY
PENNSYLVANIA
DELAWARE
MARYLAND
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WEST VIRGINIA
NORTH CAROLINA
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HAMILTON
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ELMIRA
WARREN
CLEARFIELD
PITTSBURGH
UNIONTOWN
WHEELING
PHILADELPHIA
NEW YORK
BALTIMORE
WASHINGTON
NORFOLK
CHARLESTON

Washington

1 Hoh River
2 Rattlesnake Hills

California

1 Watsonville
2 Coalinga
3 Kettleman Hills
4 Dudley Ridge
5 Devil's Den
6 Lost Hills
7 Belridge
8 Buttonwillow
9 McKittrick
10 Midway-Sunset
11 Elk Hills
12 Fruitvale
13 Kern Front
14 Mount Poso
15 Round Mountain
16 Kern River
17 Arroyo Grande
18 Casmalia
19 Santa Maria
20 Cat Canyon
21 Lompoc
22 Wheeler Ridge
23 Capitan
24 Elwood
25 Goleta
26 Santa Barbara
27 Summerland
28 Rincon-San Miguelito
29 Ventura Avenue
30 Ojai
31 Santa Paula-Timber Canyou
32 Sespe
33 Piru
34 South Mountain-Barnsdall
35 Zapo
36 Pico
37 Simi
38 Wiley
39 Newhall
40 Conejo
41 Beverly Hills
42 Salt Lake
43 Los Angeles
44 Playa Del Rey
45 Inglewood-Potrero-Lawndale
46 Montebello
47 Whittier
48 Santa Fe Springs
49 Rosecrans-Dominguez
50 Torrance
51 Long Beach
52 Seal Beach
53 Coyote Hills
54 Brea Olinda
55 Richfield
56 Huntington Beach
57 Newport
58 Moody Gulch

Canada

1 Turner Valley
2 Red Coulee (Buckley Border Montana U.S.A.)
3 Roers Imperial
4 Skiff
5 Foremost
6 Bow Island-Barnwell
7 Medicine Hat
8 Petrolia
9 Oil Springs
10 Mosa
11 Dawn
12 Bothwell
13 Dover
14 Tilbury
15 Vienna
16 Haldimand
17 Norfolk
18 Brant
19 Welland

Idaho

1 Payette

Utah

1 Ashley
2 Harley Dome
3 Cisco
4 Virgin
5 San Juan

Montana

1 Buckley-Border (Red Coulee-Canada)
2 Cut Bank
3 Kevin-Sunburst
4 Bear's Den-Whitlash
5 Harve
6 Bowes
7 Bowdoin
8 Pondera
9 Bannatyne
10 Cat Creek
11 Baker-Glendive
12 Devil's Basin
13 Broadview
14 Lake Basin
15 Hardin
16 Dry Creek
17 Soap Creek

Wyoming

1 Badger Basin
2 Elk Basin
3 Frannie
4 Four Bears
5 Shoshone
6 Oregon Basin
5 Little Buffalo Basin
8 Byron-Garland
9 Crystal Creek
10 Greybull
11 Torchlight
12 South Sunshine
13 Little Grass Creek
14 Grass Creek
15 Golden Dome
16 Maverick Springs
17 Pilot Butte
18 Hamilton
19 Warm Springs
20 Black Mountain
21 Hidden Dome
22 Billy Creek
23 Salt Creek
24 Teapot Dome
25 Midway
26 Moorcroft
27 Osage
28 Mule Creek
29 Lance Creek
30 Big Muddy
31 North Casper Creek
32 Poison Spider
33 Notches
34 Boone Dome
35 Muskrat
36 Alkali Butte
37 Big Sand Draw
38 Lander
39 Dallas
40 Derby
41 Dry Piney
42 Labarge
43 Spring Valley
44 Baxter Basin
45 Hiawatha
46 Eight Mile Lake
47 Lost Soldier
48 Wertz Dome
49 Mahoney
50 Ferris
51 Bolton Creek
52 Spindletop
53 Simpson Ridge
54 Dutton Creek
55 Rock Creek
56 Rex Lake
57 Rocky Ford
58 Moorcroft
59 Upton-Thornton

Colorado

1 Rangely
2 White River
3 Piceance
4 Bell Rock
5 Craig Dome
6 Moffat
7 Iles
8 Thornburg
9 Tow Creek
10 McCollum
11 Wellington
12 Fort Collins
13 Berthoud
14 Boulder
15 Greasewood
16 Wray
17 Garmesa
18 Debeque
19 Florence-Canyon City
20 Point Lookout
21 Mancos Creek
22 Model Dome
23 Garcia

New Mexico

1 Rattlesnake
2 Table Mesa
3 Hog Back
4 Ute Dome
5 Farmington
6 Aztec
7 Bloomfield
8 Kutz Canyon
9 Seven Lakes
10 Hospah
11 Artesia-Maljamar
12 Getty
13 Lea
14 Hobbs
15 Empire
16 Eunice
17 Cooper
18 Jal

Kansas

1 Aldrich
2 King
3 Johnson
4 Silvers
5 Luhman
6 Kruse
7 Hadley
8 Shutts-Idler
9 Fairport
10 Gorham
11 Lacrosse
12 Mohr
13 Greenawalt
14 Maeir
15 Ochs
16 Sellers-Rude
17 Miller
18 Davidson
19 Stoltenburg
20 Stratman
21 Heiken
22 Ploog
23 Beyers
24 Steckel
25 Isern
26 Schurr
27 Sharpe
28 Richardson
29 McCarty
30 Smith
31 Fleeger
32 Hugoton
33 Liberal
34 Morrison
35 Alexander
36 Welsh
37 Anderson
38 Ritz-Canton
39 Johnson
40 Voshell
41 Hollow
42 Study
43 Blake
44 Palmer
45 Haury
46 Lost Springs
47 Reznicek
48 Davis
49 Propp
50 Heigele
51 Lipps
52 Elmdale
53 Remple
54 Covert-Sellers
55 Florence-Urschell
56 Peabody
57 Elbing
58 Hazlett
59 Potwin
60 Eldorado
61 Goodrich
62 Wright
63 Greenwich
64 Curry
65 Eastborough
66 Robbins
67 Augusta

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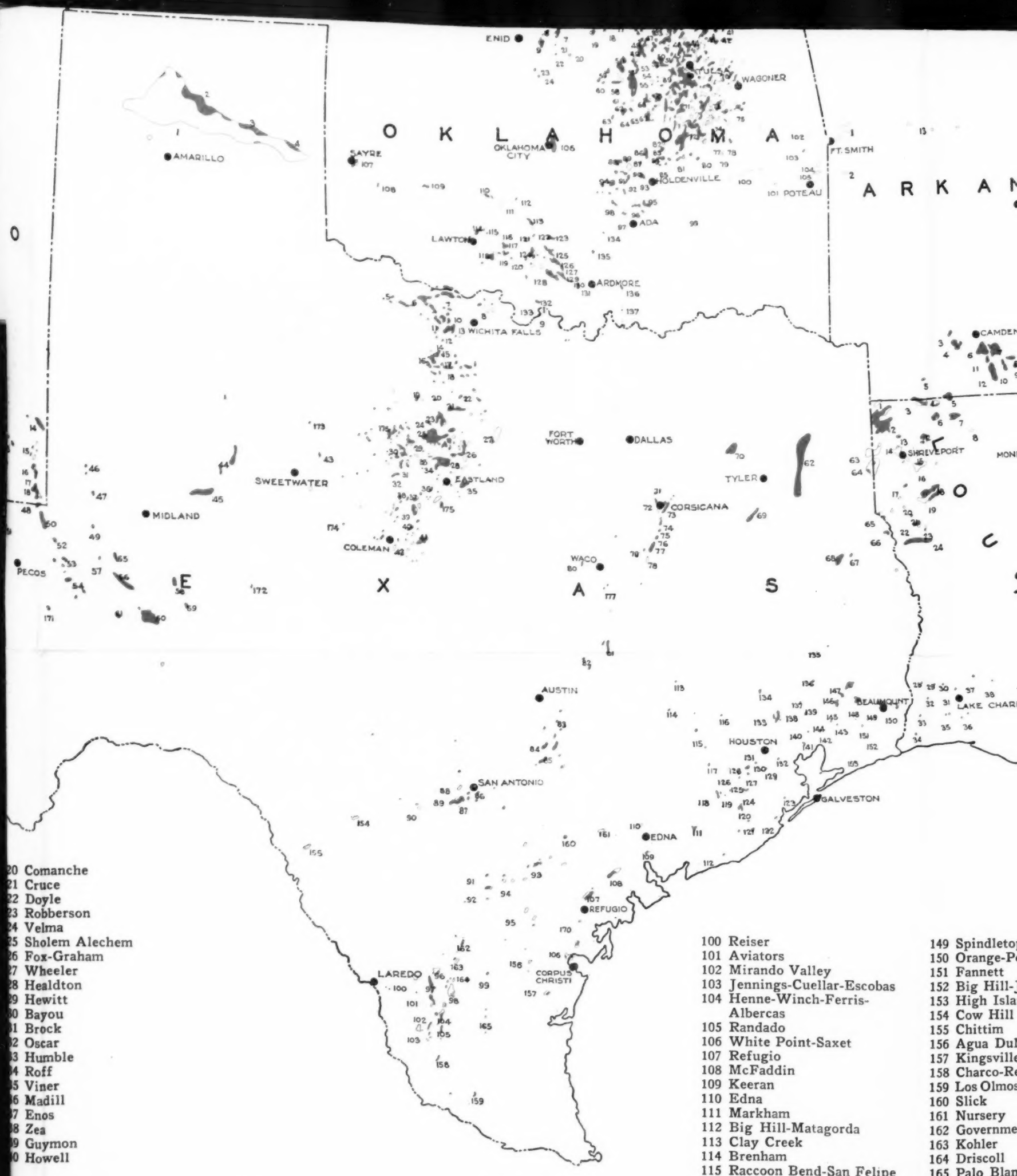
68 Love-Latta
69 Hitchcock
70 Peasel
71 Churchill
72 Oxford-Carson-Miller
73 State
74 Winfield
75 Rainbow Bend-Graham
76 Olson-Padgett
77 Douglas
78 Williams
79 Sluss-Smock-Haverhill
80 Mohawk-Schaffer
81 Leon-Blakeman
82 Fox-Bush
83 Snowden-McSweeney
84 Eastman
85 Estes
86 Richardson
87 Arkansas City
83 Atyco-Pixlee
89 Browning-Teeter-Scott
90 Demalorie-Sowder-Seeley
91 Bradfield
92 Wick-Fromm
93 Burkett-Thrall-Agard-Polhamus
94 Gaffney-Wiggins
95 Sallyards-Drum-Bitler
96 Young
97 Keighley-Seward
98 Weirshing
99 Eureka
100 Beaumont
101 Porter
102 Hanna
103 Grand Summit
104 Dexter
105 Falls City
106 Frankhouser
107 Hatch
108 Lamont
109 Virgil
110 Edwards-Patterson
111 McClaskey-Winterscheid
112 Gilroy-Quincy
113 Toronto-Webb
114 Climax
115 Severy
116 Bush-Denton
117 Moline
118 Starr
119 Sedan
120 Elgin
121 Fairfax
122 Monticello
123 Big Lake
124 Paola
125 Rantoul
126 Garnett
127 Bush City
128 Parker-Goodrich
129 Neosho Falls
130 Colony
131 Iola
132 Moran
133 Harder
134 Humboldt
135 Chanute-Erie
136 Fredonia-Benedict-Buffalo
137 New Albany
138 Neodesha
139 Cherryvale
140 Elk City-Longton
141 Wayside-Bolton
142 Tyro
143 Coffeyville
144 Labette
145 Miles

Oklahoma

1 Deer Creek
2 Braman
3 Blackwell
4 Hubbard-Otstot
5 Thomas
6 Tonkawa
7 Billings
8 Barnes
9 Garber
10 Newkirk
11 Mervine
12 Ponca City
13 Frankfort
14 Foraker
15 Burbank
16 Fairfax
17 Ralston
18 Donahue
19 Morrison
20 Perry
21 Polo
22 Bu-Vi-Bar
23 Roxana
24 Lovell
25 Buck Creek
26 Pond Creek
27 Hickory Creek-Copan-Canary-Wann
28 Dewey-Bartlesville
29 Ursula-Domes-Okesa
30 Atlantic
31 Pawhuska
32 Nelogany-Pershing
33 Wynona
34 Ramona-Barnsdall-Avant
35 Vera
36 Glen Oak-Adair
37 Nowata
38 California Creek
39 Wimer
40 Chelsea-Vinita
41 Foyil
42 Claremore
43 Collinsville
44 Skiatook-Sperry-Owasso-Turley-Tulsa
45 Hominy Falls-Bird Creek
46 Wildhorse
47 Hominy
48 Boston-Cleveland
49 Hallett-Terlton
50 Osage City
51 Prue
52 Keystone-Manford
53 Jennings
54 Olive
55 Cushing
56 Maramec
57 Quay-Yale
58 March
59 Ingalls
60 Mehan-Ripley
61 Agra
62 Kendrick
63 Chandler
64 Davenport
65 Stroud
66 Depew
67 Billingslea
68 Bristow
69 Kelleyville
70 Sapulpa-Kiefer-Glenn-Jenks-Mounds
71 Beggs-Okmulgee
72 So. Okmulgee-Lyons-Quinn-Henryetta
73 Stone Bluff-Haskell-Bald Hill
74 Morris
75 Muskogee
76 Broken Arrow-Wagoner
77 Stedham
78 Onapah
79 Eufaula
80 Hanna
81 Dustin
82 Okemah
83 Midwest
84 Papoose
85 Furhman-Wetumka
86 Cromwell
87 Rood
88 Earlsboro
89 Searight
90 Seminole
91 Bowlegs
92 Little River
93 Wewoka
94 Maud-Parson Switch
95 Allen
96 Francis-Steedman
97 Ada
98 Bebee
99 Coal
100 Quinton
101 Red Oak
102 Sequoyah
103 Spiro
104 Cameron
105 Poteau
106 Oklahoma City
107 Sayre
108 Granite
109 Gotebo
110 Cement
111 Chickasha
112 Harness
113 Kilgore
114 Lawton
115 Hanbury
116 Nellie
117 Duncan
118 Walters
119 Baird-Magnolia-Rainola-Empire
120 Comanche
121 Cruce
122 Doyle
123 Robberson
124 Velma
125 Sholem Alechem
126 Fox-Graham
127 Wheeler
128 Healdton
129 Hewitt
130 Bayou
131 Brock
132 Oscar
133 Humble
134 Rolf
135 Viser
136 Madill
137 Enos
138 Zea
139 Guymon
140 Howell

Texas

1 Amarillo
2 Hutchinson-Carson
3 Pampa
4 Shamrock
5 Vernon-Pluhman-Sigler
6 Electra-Landreth
7 Burkburnett-Texhoma
8 Petrolia
9 Nacona
10 Iowa Park-Parker
11 Freeman-Hampton
12 Texhoma-Gose-Perterson
13 Holliday-Panther
14 Sunshine
15 Swastika
16 Harmel-Gambrell
17 Hausler-Ragle
18 Litchfield
19 Masters
20 Bashara
21 South Bend-Bunger-Herron
22 Halmack
23 Douglass-Ivan
24 Ball
25 Breckenridge
26 Strawn
27 Mineral Wells-Brazos
28 Ranger
29 Ibex-Curry
30 Moran-Sedgwick
31 Baird
32 Putnam
33 Leroy
34 Eastland
35 Desdemona
36 Hillburn
37 Pioneer
38 Cross Plains
39 Cross Cut
40 Fry-Smith-Elli
41 Brownwood
42 Trickham-Jane
43 Noodle Creek
44 Westbrook-De
45 Chalk-Settles-H
46 Deep Rock-For
47 Cowden
48 Leck-Llano
49 Penn
50 Hendricks
51 Wheat-Monroe
52 O'Brien
53 Shipley-Bennet
54 Pecos Valley-M
55 Church-Fields-I
56 McCamey-Tayl
57 Tubbs
58 Big Lake-Skell
59 World
60 Yates-Toborg-T
61 Taylor-Link
62 (East Texas) gore-Joiner
63 Waskom
64 Bethany
65 Joaquin



20 Comanche
21 Cruce
22 Doyle
23 Robberson
24 Velma
25 Sholem Alechem
26 Fox-Graham
27 Wheeler
28 Healdton
29 Hewitt
30 Bayou
31 Brock
32 Oscar
33 Humble
34 Roff
35 Viner
36 Madill
37 Enos
38 Zea
39 Guymon
40 Howell

Texas

1 Amarillo
2 Hutchinson-Carson
3 Pampa
4 Shamrock
5 Vernon-Pluhman-Sigler
6 Electra-Landreth
7 Burkburnett-Texhoma
8 Petrolia
9 Nacona
10 Iowa Park-Parker
11 Freeman-Hampton
12 Texhoma-Gose-Perterson
13 Holliday-Panther
14 Sunshine
15 Swastika
16 Harmel-Gambrell
17 Hausler-Ragle
18 Litchfield
19 Masters
20 Bashara
21 South Bend-Bunger-Herron
22 Halmack
23 Douglass-Ivan
24 Ball
25 Breckenridge
26 Strawn
27 Mineral Wells-Brazos
28 Ranger
29 Ibex-Curry
30 Moran-Sedgwick
31 Baird
32 Putnam
33 Leroy
34 Eastland
35 Desdemona
36 Hillburn
37 Pioneer
38 Cross Plains
39 Cross Cut
40 Fry-Smith-Ellis
41 Brownwood
42 Trickham-Janellen
43 Noodle Creek
44 Westbrook-Denman-Iatan
45 Chalk-Settles-Roberts
46 Deep Rock-Ford
47 Cowden
48 Leck-Llano
49 Penn
50 Hendricks
51 Wheat-Monroe
52 O'Brien
53 Shipley-Bennett
54 Pecos Valley-Masterson
55 Church-Fields-McElroy
56 McCamey-Taylor
57 Tubbs
58 Big Lake-Skelly-Grayson
59 World
60 Yates-Toborg-Tippett
61 Taylor-Link
62 (East Texas) Lathrop-Kilgore-Joiner
63 Waskom
64 Bethany
65 Joaquin
66 Pickering
67 Chirens
68 Nacogdoches
69 Boggy Creek
70 Van
71 Chatfield
72 Corsicana
73 Powell
74 Richland-Angus
75 Currie
76 Wortham
77 Mexia
78 Groesbeck
79 Nigger Creek
80 So. Bosque
81 Minerva-Tracy-Rockdale
82 Thrall-Chapman
83 Lytton Springs-Yost-Dale
84 Luling
85 Darst Creek-Salt Flat
86 Alta Vista-Yturri-Southton
87 Mission-So. Medina
88 Gas Ridge
89 Somerset
90 Adams-Ina
91 Crowther
92 Calliham
93 Pettus
94 Three Rivers-Oakville-Lobo
95 Lucas-Mathis-Sundial
96 Carolina Texas
97 Mirando City
98 Cole-Dinn
99 Piedras Pintas
100 Reiser
101 Aviators
102 Mirando Valley
103 Jennings-Cuellar-Escobas
104 Henne-Winch-Ferris-Albercas
105 Randado
106 White Point-Saxet
107 Refugio
108 McFaddin
109 Keeran
110 Edna
111 Markham
112 Big Hill-Matagorda
113 Clay Creek
114 Brenham
115 Raccoon Bend-San Felipe
116 Hockley
117 Orchard
118 Boling
119 Damon Mound
120 West Columbia
121 Allen-Clemens-Hawkinsville
122 Stratton Ridge-Bryan Heights
123 Hoskins Mound
124 Nash
125 Long Point
126 Big Creek
127 Rabbs Ridge
128 Sugarland
129 Manvel-Danbury
130 Blue Ridge
131 Pierce Junction
132 Mykawa
133 Humble
134 Conroe
135 Sunshine
136 Davis Hill
137 North Dayton
138 Esperson
139 South Liberty
140 Barbers Hill
141 Goose Creek
142 Lost Lake
143 Hankamer
144 Moss Bluff
145 Hull
146 Batson
147 Saratoga
148 Sour Lake
149 Spindleto
150 Orange-P
151 Fannett
152 Big Hill-J
153 High Isla
154 Cow Hill
155 Chittim
156 Agua Du
157 Kingsville
158 Charco-R
159 Los Olmos
160 Slick
161 Nursery
162 Governme
163 Kohler
164 Driscoll
165 Palo Blan
Alta Mesa
170 Aransas
171 Pryor
172 Tankersle
173 Stephens
174 McMillan
175 Sipe Spri
176 Cook
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1 Alma-Kib
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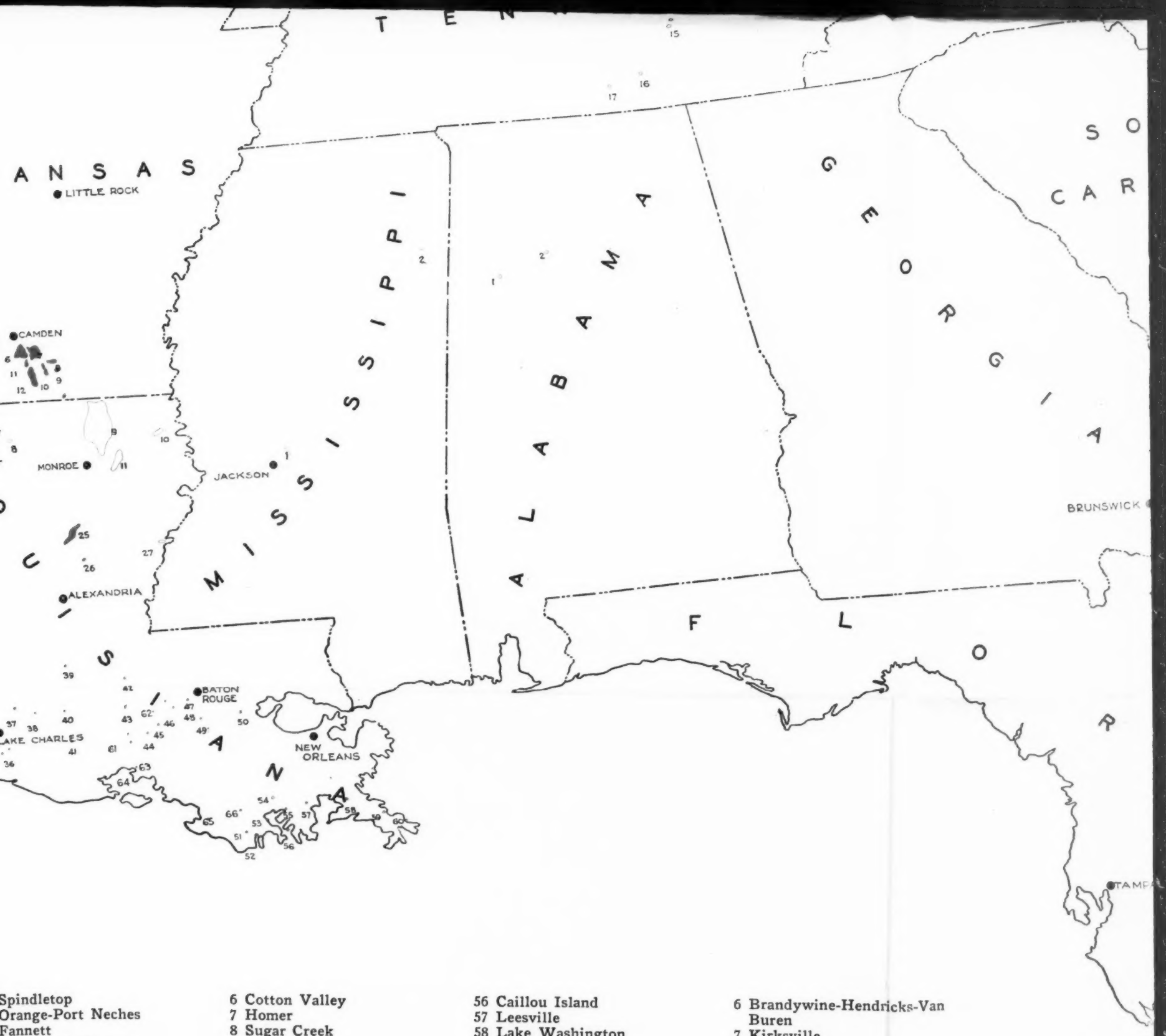
2 Mansfield
3 Nevada
4 Stephens
5 Bradley
6 Louann
7 Smackove
8 Champagn
9 Urbana
10 East Eldo
11 Lisbon
12 Eldorado
13 Clarksvill

Lo

1 Rodessa
2 Caddo
3 Cartervill
4 Shongaloo
5 Haynesvil



Spindletop
Orange-Port Neches
Fannett
Big Hill-Jefferson
High Island
Cow Hill
Chittim
Agua Dulce
Kingsville
Charco-Redondo
Los Olmos-Roma-Rio Grande
Slick
Nursery
Government Wells
Kohler
Driscoll
Palo Blanco-Alta Verde-Alta Mesa
Aransas
Pryor
Tankersley
Stephens
McMillan
Sipe Springs
Cook
Satin

Arkansas

Alma-Kibler-Massard Prairie
Williams-Smelter
Mansfield
Nevada
Stephens
Bradley
Louann
Smackover
Champagnolle
Urbana
East Eldorado
Lisbon
Eldorado
Clarksville

Louisiana

Rodessa
Caddo
Carterville
Shongaloo
Haynesville

6 Cotton Valley
7 Homer
8 Sugar Creek
9 Monroe
10 Floyd
11 Richland
12 Bellevue
13 Dixie
14 Shreveport
15 Sligo
16 Elm Grove
17 Holly
18 Crichton
19 Bull Bayou
20 Spider
21 Benton
22 Pleasant Hill
23 Spring Ridge
24 Zwolle
25 Urania
26 White Sulphur Springs
27 Ferriday
28 Starks
29 Edgerly
30 Sulphur
31 Lockport
32 Vinton
33 Black Bayou
34 Cameron Meadows
35 Hackberry and East Hackberry
36 Sweet Lake-Calcasieu Lake
37 Iowa
38 Welsh
39 Pine Prairie
40 Jennings
41 Gueydan
42 Port Barre
43 Anse La Butte
44 New Iberia
45 Fausse Pointe
46 Bayou Bouillon
47 Choctaw
48 Bayou Blue
49 White Castle-Napoleonville
50 Sorrento
51 Dog Lake
52 Lake Pelto
53 Bay St. Elaine
54 Houma
55 Lake Barre
56 Caillou Island
57 Leesville
58 Lake Washington
59 Venice
60 Garden Island Bay
61 Jefferson Is.-Avery Is.
62 Section 28-Bayou DeGlaise
63 Cote Blanche
64 Vermillion Bay
65 East Bay Junop
66 Four Isle

Mississippi

1 Jackson
2 Amory

Michigan

1 Muskegon
2 Bloomfield
3 Clare
4 Leaton
5 Mount Pleasant
6 Saginaw
7 Bellville
8 Petersburg

Illinois

1 Colmar
2 Jacksonville
3 Cartersville
4 Carlyle
5 Dupo
6 Waterloo
7 Sparta
8 Centralia-Sandoval
9 Westfield
10 Union
11 Robinson area
12 Bridgeport area
13 Allendale

Indiana

1 Lima
2 Siosi
3 Sullivan County
4 Tri County
5 Greensburg
6 Brandywine-Hendricks-Van Buren
7 Kirksville
8 Rushville
9 Noblesville-Lipton
10 Peru
11 Boone Township
12 Barkley-Walker-Gillam Township

Kentucky

1 Niagara
2 Tri County
3 Sebree
4 Warren County
5 Allen County
6 Cumberland Saddle
7 Wayne County
8 Knox County
9 Station Camp
10 Irvine
11 Menifee
12 Compton
13 Big Sinking
14 Laurel Creek-Paint Creek
15 Bussyville-Fallsburg
16 Inez or Martin County
17 Floyd County
18 Ashland
19 Hart County

Tennessee

1 Jones Creek
2 Harpeth Valley
3 Sumner County
4 Tinsley Bottom
5 Lock Branch
6 Mill Creek
7 Celina-Fox Springs
8 Willow Grove
9 Ashburn Creek-Jouett Creek
10 Superior-Riverton
11 Glenmary-Boone-Camp Creek
12 Sunbright
13 Spring Creek
14 Cookeville
15 McMinnville
16 Winchester Deckerd
17 Smithland

Alabama

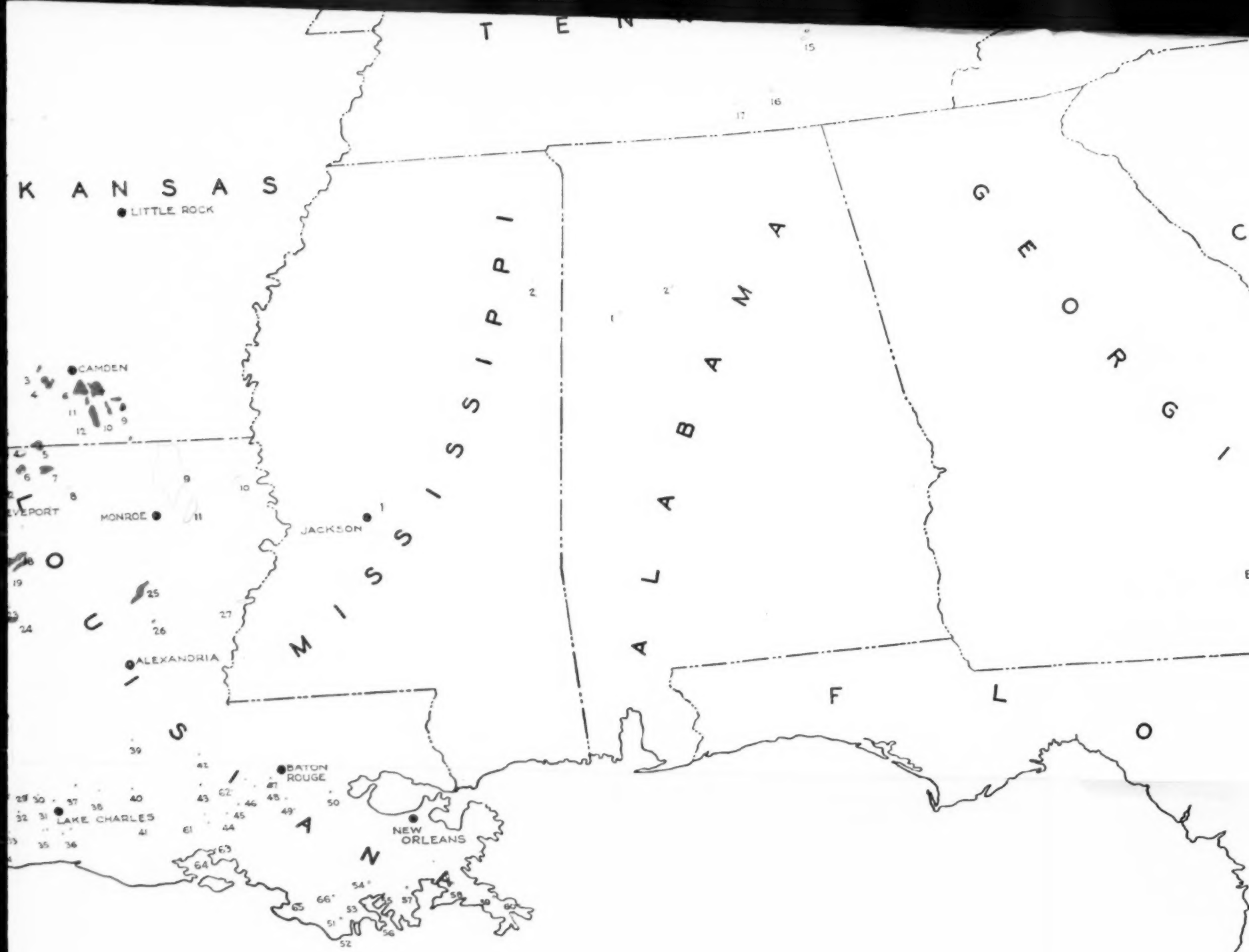
1 Fayette
2 Jasper

Ohio

1 Lima
2 Clinton Sand
3 Homer
4 Cambridge
5 Scio
6 Cow Run

West Virginia

1 Sistersville, Middle Bo
McKim, Hebron, Wick
Marys, Eureka (oil) Sc
(gas)
2 Boaz, Waverly, Mur
town, Volcano
3 Bonds Creek, Cairo, H
ville, Macfarlan, Berea
Washbunn (gas)
4 Hughes River, Burn
Springs
5 Yellow Creek, Bowles
Hattie, Tanner (oil) Re
Stumptown (gas)
6 Copley, Sand Fork
Baldwin, Letter Gap, B
ville, Salt Lick (gas)



149 Spindletop
150 Orange-Port Neches
151 Fannett
152 Big Hill-Jefferson
153 High Island
154 Cow Hill
155 Chittim
156 Agua Dulce
157 Kingsville
158 Charco-Redondo
159 Los Olmos-Roma-Rio Grande
160 Slick
161 Nursery
162 Government Wells
163 Kohler
164 Driscoll
165 Palo Blanco-Alta Verde-Alta Mesa
170 Aransas
171 Pryor
172 Tankersley
173 Stephens
174 McMillan
175 Sipe Springs
176 Cook
177 Satin

Arkansas

1 Alma-Kibler-Massard Prairie Williams-Smelter
2 Mansfield
3 Nevada
4 Stephens
5 Bradley
6 Louann
7 Smackover
8 Champagnolle
9 Urbana
10 East Eldorado
11 Lisbon
12 Eldorado
13 Clarksville

Louisiana

1 Rodessa
2 Caddo
3 Carterville
4 Shongaloo
5 Haynesville
6 Cotton Valley
7 Homer
8 Sugar Creek
9 Monroe
10 Floyd
11 Richland
12 Bellevue
13 Dixie
14 Shreveport
15 Sligo
16 Elm Grove
17 Holly
18 Crichton
19 Bull Bayou
20 Spider
21 Benton
22 Pleasant Hill
23 Spring Ridge
24 Zwolle
25 Urania
26 White Sulphur Springs
27 Ferriday
28 Starks
29 Edgerly
30 Sulphur
31 Lockport
32 Vinton
33 Black Bayou
34 Cameron Meadows
35 Hackberry and East Hackberry
36 Sweet Lake-Calcasieu Lake
37 Iowa
38 Welsh
39 Pine Prairie
40 Jennings
41 Gueydan
42 Port Barre
43 Anse La Butte
44 New Iberia
45 Fausse Pointe
46 Bayou Bouillon
47 Choctaw
48 Bayou Blue
49 White Castle-Napoleonville
50 Sorrento
51 Dog Lake
52 Lake Pelto
53 Bay St. Elaine
54 Houma
55 Lake Barre
56 Caillou Island
57 Leesville
58 Lake Washington
59 Venice
60 Garden Island Bay
61 Jefferson Is.-Avery Is.
62 Section 28-Bayou DeGlaise
63 Cote Blanche
64 Vermillion Bay
65 East Bay Junop
66 Four Isle

Mississippi

1 Jackson
2 Amory

Michigan

1 Muskegon
2 Bloomfield
3 Clare
4 Leaton
5 Mount Pleasant
6 Saginaw
7 Bellville
8 Petersburg

Illinois

1 Colmar
2 Jacksonville
3 Cartersville
4 Carlyle
5 Dupo
6 Waterloo
7 Sparta
8 Centralia-Sandoval
9 Westfield
10 Union
11 Robinson area
12 Bridgeport area
13 Allendale

Indiana

1 Lima
2 Siosi
3 Sullivan County
4 Tri County
5 Greensburg
6 Brandywine-Hendricks-Van Buren
7 Kirksville
8 Rushville
9 Noblesville-Lipton
10 Peru
11 Boone Township
12 Barkley-Walker-Gillam Township

Kentucky

1 Niagara
2 Tri County
3 Sebree
4 Warren County
5 Allen County
6 Cumberland Saddle
7 Wayne County
8 Knox County
9 Station Camp
10 Irvine
11 Menifee
12 Compton
13 Big Sinking
14 Laurel Creek-Paint Creek
15 Bussyville-Fallsburg
16 Inez or Martin County
17 Floyd County
18 Ashland
19 Hart County

Tennessee

1 Jones Creek
2 Harpeth Valley
3 Sumner County
4 Tinsley Bottom
5 Lock Branch
6 Mill Creek
7 Celina-Fox Springs
8 Willow Grove
9 Ashburn Creek-Jouett Creek
10 Superior-Riverton
11 Glenmary-Boone-Camp Creek
12 Sunbright
13 Spring Creek
14 Cookeville
15 McMinnville
16 Winchester Deckerd
17 Smithland

Alab

1 Fayette
2 Jasper

O

1 Lima
2 Clinton San
3 Homer
4 Cambridge
5 Scio
6 Cow Run

West V

1 Sistersville, McKim, He Marys, Eure (gas)
2 Boaz, Wav town, Volca
3 Bonds Creek ville, Macfar Washbunn
4 Hughes Ri Springs
5 Yellow Cree Hattie, Tann Stumptown
6 Copley, Sa Baldwin, Le ville, Salt L

Oil Fields—Solid
Natural Gas Fields—Outlined

Copies of this map may be procured from
The Oil and Gas Journal
Tulsa, Oklahoma
PRICE $2.00 EACH

Alabama

ayette
sper

Ohio

ma
linton Sand
omer
ambridge
io
ow Run

West Virginia

stersville, Middle Bourne, cKim, Hebron, Wick, St. arys, Eureka (oil) Schultz as)
oaz, Waverly, Murphysown, Volcano
onds Creek, Cairo, Harrisle, Macfarlan, Berea (oil), Vashbunn (gas)
ughes River, Burning prings
ellow Creek, Bowles Run, attie, Tanner (oil) Revere, tumptown (gas)
opley, Sand Fork (oil), aldwin, Letter Gap, Burnsille, Salt Lick (gas)

7 Grove-Fink.
8 Greenwood, Pricetown, Stringtown, Piney, Smithfield, Wallace, Salem, Wolf Summit (oil), Smithton (gas)
9 Mount Clare, Benson (oil), Freemansburg, Wilsonburg (gas)
10 Shinnston (oil), Pruntytown (gas)
11 Mannington, Flat Run, Fairview, Statler Run (oil), Maidsville, Mooresville (gas)
12 Burton, St. Leo, Glover Gap, Dents Run (oil)
13 Marion, St. Joseph, Cameron, Littleton, Pine Grove, Steels Run (oil)
14 Carson, Turkey Foot, Hollidays Grove, Suckerrod (oil)
15 Glendale (oil), Protor Creek, Meighen, Majorsville
16 Barbour County (oil and gas)
17 Frenchton (gas)
18 Craddock (gas)
19 Rosedale (oil), Minnora, Chapel (gas)
20 Tariff, Birch Run (oil), Roane County, Queen Shoals Bomont (gas)
21 Sandyville, Liverpool, Gay, Spencer or Tanner's Run (oil), Stover Fork (gas)
22 Rush Run or Clover, Walton or Rock Creek (oil)
23 Doctors Creek, Blue Creek
24 Cabin Creek, Ward or Kelly's Creek, Joe's Creek (oil), Malden, Marmet, Racine, Cedar Grove, Montgomery (gas)
25 Griffithsville (oil), Eggleton (gas)
26 Milton or Beckett (oil and gas)
27 Louisa or Potters (oil), East Lynn, Midkiff, Dunlow (gas)
28 Chapmanville (gas)

New York

1 Allegany Field
2 Wayne-Dundee

Pennsylvania

1 Bradford
2 Warren County
3 Venango-Clarion
4 Butler-Armstrong
5 McDonald
6 Washington County
7 Hebron
8 Tioga

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

TWO WELLS BETTER THAN ONE

In such literature as I have read on the subject of well spacing I have found nothing that made it clear whether you can get the most oil out of the ground by limiting the number of wells within a given area, say 40 acres, or by drilling the ground full of holes. This is a matter of importance because if the owner of a property is under no kind of pressure that compels him to get all the oil to the surface in the shortest possible time he, of course, can effect enormous savings, especially in deep sand areas, by keeping down the number of wells. I would be glad to get some information on this point.—E. I. S.

It may be set down as a generally accepted fact that the greater the number of wells in a given area the greater will be the quantity of oil produced. It does not follow from this, however, that "drilling the ground full of holes," to quote your words, would be advisable from any point of view. Dr. W. P. Haseman says, in a discussion of this subject:

"It is well known that two wells drilled to each 160-acre tract in an oil pool and so spaced as to set up a drainage area of 80 acres per well will produce more oil from the tract than will a spacing of wells with a drainage area of 160 acres per well. In fact the smaller the drainage area per well the greater the ultimate production from a given tract. This fact is unmistakably and unquestionably verified by field data published in Reports of Investigations, Serial No. 2,270, August, 1921, U. S. Bureau of Mines, and in various articles in trade journals. One record from the Bureau of Mines report is given below as typical and representative of the relation between drainage area and ultimate production of oil from a tract:

Table 1

Drainage area in acres per well—	Acreage yield
15	987
10	1,420
7	2,000
5	2,260
3	3,250

"It is assumed that within reasonable limits the wells of the tracts were drilled simultaneously and produced similarly and simultaneously throughout the most active part of their lives. The greatest ultimate acreage yield from the rock reservoir underlying the above tracts through wells without the introduction of external energy would be around 5,000 bbls. per acre with the drainage area approaching zero acres per well. Furthermore, the following yields per acre are indicated:

Table 2

Drainage area in acres per well—	Acreage yield	Per cent increase
80	218	....
40	425	95.0
20	810	90.6
10	1,460	81.2
5	2,340	60.2
2.5	3,300	41.4
1.25	4,000	21.3

"The third column in Table 2 gives the increased per cent in yield per acre of oil from the given tract by halving the drainage area per well and the wells being produced similarly and simultaneously. For example, a tract having a spacing of wells with a drainage area of 10 acres per well will yield 81 per cent more oil than with a drainage area of 20 acres per well; 171 per cent more than with a drainage area of 40 acres per well; and 266 per cent more than with a drainage area of 80 acres per well."

HOW MUCH IS A FOURBLE?

I would appreciate it very much if you would advise me as to the meaning of the word "fourble" as used in reporting the size of oil wells in the Southwest, particularly as to how the size in fourbles compares with the size in barrels.—E. N. L.

You are not the only person bothered by the use of the term "fourble" in oil scout reports and there is a growing feeling that a more definite way of expressing a well's probable productivity might well be substituted. Although the word is in common use among scouts in rotary drilled fields, it usually conveys little more information than the mere fact that oil has been found in the well under consideration.

As you probably know, the words "trible" and "fourble" have come into use in connection with rotary drilling, signifying the number of joints of drill pipe pulled from or run into a well at one time. A trible is three joints and a fourble four. A fourble is roughly referred to as about 90 feet long. You probably know too that it is common practice to use a sand tester when it is desired to test the fluid content of a rotary drilled well without running pipe.

As the drill pipe is removed from the well and unscrewed in making a sand test a check is made for the first appearance of fluid inside the string. Let us suppose that the fluid does not appear until the one hundred and eighth joint of pipe from the bottom is unscrewed. Dividing 108 by 4, the oil scout would report that the well tested 27 fourbles of oil and he would give the time during which the tester was open at the bottom of the hole to permit the fluid to enter the drill pipe.

The quantity of oil entrapped inside the drill pipe varies with the weight and size of the pipe and unless these details are known the report in fourbles offers no definite measure in terms of barrels. If use of the sand tester indicates to the operator that his well is likely to be commercially productive of oil and gas, he will set casing and complete the hole in the regular manner. Not until the oil begins to flow into a tank is an accurate gauge made.

By a little calculation it is possible to reach a closer estimate of a well's probable capacity from a scout's "fourble" report, than is indicated here, though at best it is too vague to be satisfactory. If we know the inside diameter of the drill pipe to be 4 inches, then it will hold about .6528 of a gallon or 231 cubic inches for each foot of length. With the fourbles estimated at 90 feet each and 27 of them full of oil, there would be 2,430 feet of oil in the hole. This would equal 1,586.22 gallons, or about 37.5 bbls. of 42 gallons each. But without actual knowledge of the exact size of the drill pipe used it can be seen that only a rough approximation of the fluid content is possible.

Why Was It Called That?

JUMBO

"Jumbo" was the name given to the second gas well drilled in 1885 by Samuel Speechley on his farm 7 miles east of Oil City, Pa., and producing from the Speechley sand. It was the marvel of its day. The flow was sufficient for a time to supply Oil City, Franklin and Titusville with all the gas they required.

The name Jumbo was applied because the well was a big one. But how did Jumbo come to mean big? Few boys of this generation could say, but the man whose memory carries him back to circus-going days of the eighties knows. Jumbo was an elephant bought by P. T. Barnum from the London Zoological Gardens and proclaimed on flaming posters as the most colossal animal in captivity. "Jumbo's ears are as big as parlor doors" was one modest assertion. Jumbo was a subject of wide and wondering discussion, sedulously nurtured by the famous showman, and it became a common practice to refer to almost anything of great size as a Jumbo.

COMPUTING RESERVES OF GAS

Can you tell me where I can get a table to compute the probable quantity of gas a well will still produce, figuring the original rock pressure and the rock pressure still left in the well and taking into consideration the quantity of gas the well has produced?—J. C. R.

This department does not know of any table for this purpose, but below is the formula usually employed. It was provided in answer to your question by the U. S. Bureau of Mines.

$$Q = \frac{V}{14.4}(P_2 - P_1)$$

Q is the quantity of gas produced during a decrease in rock pressures from P_1 to P_2.

V is the actual volume of the reservoir in cubic feet at atmospheric pressure of 14.4 pounds per square inch.

P_1 is the original rock pressure, pounds per square inch absolute.

P_2 is the present rock pressure, pounds per square inch absolute.

For an application of this formula we refer you to the May 14, 1931, issue of The Oil and Gas Journal, page 82, where you will find an answer to a question somewhat like yours but dealing with definite factors.

The U. S. Bureau of Mines has published technical papers on gas measurement and they can be obtained from the Government Printing Office, Washington, D. C. You may also find Diehl's "Natural Gas Handbook" published by Metric Metal Works, Erie, Pa., of interest.

STARTING A SUNDAY SHUTDOWN

There is a good deal of talk in this district of starting a Sunday shutdown like the one which I understand is in effect in some of the Texas fields. Could you tell me how the operators in any district go to work to put such a weekly shutdown into effect? Has this plan of curtailing production been endorsed by any of the important organizations of oil men?—F. L. D.

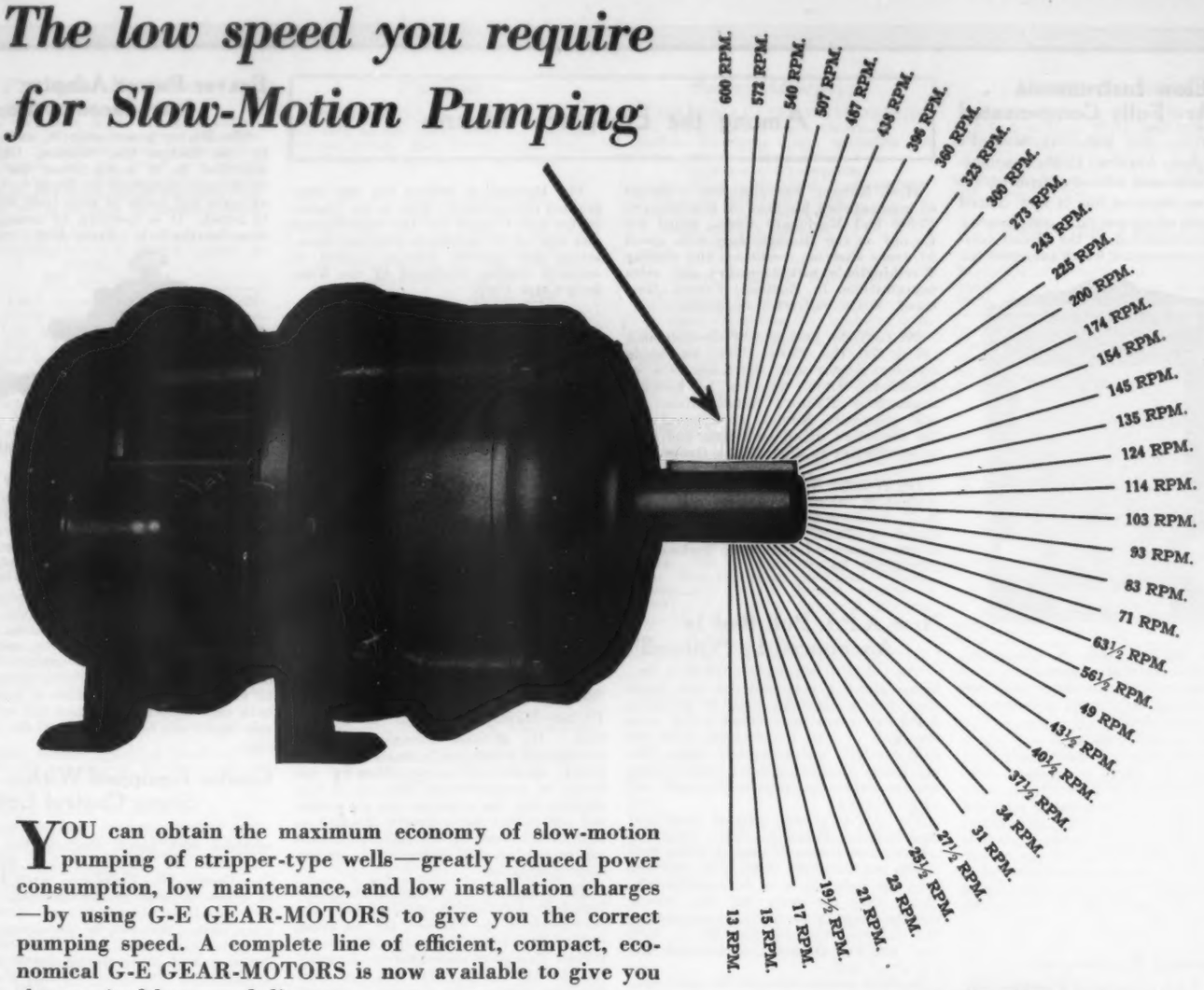
The essential requirements in putting a Sunday shutdown into operation are unanimity among the operators as to the benefits of such a step, formal adoption of an agreement to observe the shutdown and then faithfully adhering to the agreement.

This method of restricting production is approved by leaders in the oil industry. As for the approval of important organizations of oil men, there is at hand the following resolution adopted by the Texas division of the Mid-Continent Oil and Gas Association:

"Whereas, numerous producers of crude oil in the promotion of conservation and providing employment for the greatest number of men, without the burden falling on any district or group, have voluntarily put into execution the Sunday closing of all wells, or where conditions necessitate continuous operation reducing runs by one-seventh, now, therefore, be it resolved by the Texas division of the Mid-Continent Oil and Gas Association that it commends this action as being fair to both the large and small operator alike. And be it further resolved, that the operators over the state be urged to so operate their properties that it may not be necessary to shut down and in many instances abandon wells whose production would be forever lost as well as throwing hundreds of oil field workers out of employment."

G-E GEAR-MOTORS

The low speed you require for Slow-Motion Pumping



YOU can obtain the maximum economy of slow-motion pumping of stripper-type wells—greatly reduced power consumption, low maintenance, and low installation charges—by using G-E GEAR-MOTORS to give you the correct pumping speed. A complete line of efficient, compact, economical G-E GEAR-MOTORS is now available to give you the required low speed direct.

The G-E GEAR-MOTOR combines the advantages of a normal-speed motor and efficient, internal, helical gearing, built into a single, compact unit that delivers the full rated horsepower of the motor at the output shaft. This single unit is easily handled and economically installed. Totally enclosed, accurately cut gears, bathed in oil, contribute to low maintenance and long life.

G-E GEAR-MOTORS are available in a wide range of motor ratings and speed ratios, in polyphase, single-phase, and direct-current types. Complete information can be obtained from the nearest G-E sales office or G-E Motor Dealer, or from General Electric Company, Schenectady, New York.

G-E gear-motor, typical of designs for very low speeds

STANDARD 3-PHASE RATINGS

3/4 to 75 hp., 600 to 13 rpm.

Other speeds and horsepower ratings can be furnished on request. Speed adjustment can be obtained by selecting a motor with the necessary electrical characteristics.

201-231A

GENERAL ELECTRIC

NEW AND IMPROVED EQUIPMENT

New Flow Instruments Are Fully Compensated

The Neilan Co., Ltd., 641 Santa Fe Avenue, Los Angeles, Calif., manufacturer of automatic control equipment, announces an improved line of flow control instruments which are fully compensated. This is accomplished by the Neilan volu-pressure compensator which smoothes out

pulsations without loss in sensitivity. Due to this simplified compensator, it is an easy matter for the average plant operator to obtain any degree of compensation that is required.

Another feature is the ease with which the flow controllers may be changed from one differential range to another. The high and low pressure mercury pots have been replaced by two concentric stainless steel cylindrical tubes. New differential ranges can be obtained readily by inserting new cylindrical tubes of the proper diameter. This provides conversion at a minimum expense while the stainless steel eliminates the possibility of inaccuracy due to corrosion.

Mechanical System of Lubrication Perfected

The Hills-McCanna Co., 2349 Nelson Street, Chicago, has developed a system for the mechanical application of light greases and heavy oils to points requiring regular lubrication. This system completes the company's line of equipment for lubricating any type of machinery that requires regular amounts of oils and greases. It is a single-line system. The main unit is placed in a convenient location and a single feeder line is taken to the farthest point requiring lubrication. Branch lines then are taken from the main line to each bearing. No return line is required. An independent mechanical measuring unit is placed at each bearing.

The measuring valve allows only the amount of grease it is set for to be fed to the bearing, and then acts as a shut-off valve, preventing any more lubricant passing and being wasted. Regardless of the amount of pressure in the line only the amount the valve is set for can pass to the bearing. There is visible evidence that the valve is operating. An added advantage is that the pressure is applied to the line only at the time the points are being lubricated. No air, spring or means other than a positive pump is used to accomplish delivery.

The system can be motor driven, mechanically operated, or operated by a hand crank. The type depends upon the service. Hoppers, valves, motors, etc., are made in sizes for a variety of services.

Among the Equipment Houses

H. C. Ramsey, vice president in charge of international business of Worthington Pump and Machinery Corp., sailed for Europe on the Majestic July 8 to spend 10 weeks studying conditions and visiting Worthington's manufacturing and sales organizations in England, France, Germany, Spain and other countries.

—

W. L. Todd, president of the Columbia Oil & Gas Co., Dallas, Tex., has made an arrangement with the Kontol Co. of Cincinnati, Ohio, whereby he becomes manager of Kontol's Dallas office. He will distribute Kontol, a chemical for the resolution of oil emulsions and said to be effective as a paraffin softener.

—

Dr. Webster N. Jones, general superintendent of the processing division of the B. F. Goodrich Co., Akron, Ohio, has resigned to become director of engineering of the Carnegie Institute of Technology, Pittsburgh, Pa.

The Babcock & Wilcox Co. has been granted the exclusive rights in the United States and Canada for the manufacture and sale of the automatic pressure circulating and indirect heating system of sulphite cooking developed by the Kimberly-Clark Corp.

—

W. G. Lane is on a business trip in the Mid-Continent looking toward distribution of the "ring" packer manufactured by the Lane-Wells Co. of Los Angeles.

—

The Titusville Iron Works Co., Titusville, Pa., has opened district offices at 504 Holmes Building, Fort Worth, Tex., from which New Mexico and Texas will be covered. H. E. Hamilton, formerly general sales manager of the Oil Well Supply Co., Oil City, Pa., will be manager of the new district. The company manufactures and distributes oil field boilers and engines and commercial boilers.

New A.P.I. Pull Rod Is Announced by "Oilwell"

The Oil Well Supply Co., Oil City, Pa., is marketing a new pull rod and clamp that are dimensioned exactly to the latest A.P.I. specifications. These A.P.I. rods are made of high tensile steel, with the ends carefully and accurately upset. The upset ends provide a greater cross section, and consequently greater strength and longer service.

The A.P.I. clamps are of steel and drop-forged. Because their minimum cross-sectional area is several times that of the rod body, the clamps are stronger than the rods. It is to be noted particularly that the bolts for the clamps strictly conform to A.P.I. requirements. The three-fourths-inch size has a ⅞"x 3½" bolt and the seven-eighths-inch size a 1"x3⅞" bolt.

For still greater strength the upset ends are normalized. This pyrometer-controlled operation relieves all forging strains and refines the grain structure.

Toledo Announces Two Pipe Threading Tools

Improved Toledo 1-inch to 2-inch pipe threaders, announced by the Toledo Pipe Threading Machine Co., Toledo, Ohio, are similar to the standard No. 1 and No. 1A, except for the die head of new design and the new type pipe holder.

No bushings are needed with this new three-jaw pipe holder. The large wing-head thumb screws with micrometer line guide bars make this an easy and quick tool to center on the pipe. The three broad-faced chuck jaws hold the tool rigidly to the pipe, assuring clean cut, perfectly tapered threads that are straight on the pipe.

These tools are adapted for brass or copper as well as iron or steel pipe, as the broad-faced chuck jaws do not mar polished pipe. The large wing-head thumb screws are easy to tighten.

MOTORIZED SPEED REDUCER

A new motorized speed reducer has been added to the line of enclosed speed reducing units built by Link-Belt Co., Philadelphia, Pa.

A bulletin published by the Alloy Pump & Valve Co., 5713 Euclid Avenue, Cleveland, Ohio, is devoted to Alloy pumps, valves, fittings and castings.

Durkee Pump Jack Has Straight-Lift Feature

A new type of pump jack, the Durkee "Straight-Lift" has been developed by the Durkee Manufacturing Co. of Denver, Colo. Its greatest advantage is the straight lift which can be had and the full length of the stroke regardless of the length of stroke desired. Because of this straight lift the vibration on the polish rod and sucker rod is greatly lessened as well as the wear on the packing. Breakage of rod line and sucker rod is practically eliminated.

The length of the stroke is easily adjusted by lengthening or shortening the turnbuckle in the rod line. On the upper end of the stroke the pump jack moves slowly. This gives more time for discharging the load of oil. Since the rods start to return slowly, fluid hammer is reduced and longer life given to the rods.

This "Straight-Lift" pump jack is said to pull back more surface rod than the weight of the sucker rod in the well, without any extra weight on the jack. The pull rod is laid close to the ground, which makes for ease in installing, and is a great advantage on the lease.

The jack is manufactured by the Stearns Roger Manufacturing Co., Denver, and can be purchased through supply houses or direct from the Durkee Manufacturing Co. Detailed information regarding this jack is given in a bulletin which will be sent to anyone interested.

Ingersoll Introduces New Stainless Steel

The Ingersoll Steel & Disc Co. of Chicago (a division of the Borg-Warner Corp.) has perfected a two-ply stainless steel, the "Ingoclad," produced by a patented process from the composite ingot.

It is stated that the manufacturing process has been developed to the point where a perfect bond between the stainless steel and the carbon steel back is assured. Ingoclad stainless steel is being produced at the New Castle, Ind., plant of the company. It is expected to find many applications in the oil industry where corrosion problems are frequent. It is said that pump parts, drill machinery, steel linings, tank car linings, etc., offer uses for this new stainless steel.

Beaver Power Adapter Introduced by Borden

The Beaver power adapter, announced by the Borden Co., Warren, Ohio, is described as a worm-driven die stock using interchangeable die-heads to thread all sizes and kinds of pipe from one-half to 2-inch. It is operated by means of a three-fourths-inch heavy-duty electric

drill. A compressed-air drill may be used if desired.

With the Beaver power adapter it is possible to thread pipe up to 2-inch by power with hand tools. The workman can take it with him anywhere, and one man can handle it. It is of aluminum alloy construction. The power adapter weighs 17½ pounds. On the rear it has a self-centering chuck to hold it squarely and firmly on the pipe. On top is a convenient grip for easy handling. The double-ended drive enables the operator to cut right or left-hand threads or to back-off by power. A driving socket to fit electric or air drill chuck is supplied with each adapter. One man can operate and apply oil to the dies at the same time.

Grader Equipped With Seven Control Levers

The "Caterpillar" Sixty grader, equipped with power controls, has been introduced by the Caterpillar Tractor Co., Peoria, Ill. There are seven levers in a row in front of the operator. Each lever controls action in one direction when pushed forward, in the opposite direction when pulled back. Five of the levers control the most frequently made adjustments. The sixth, through a shift, controls either the center shift or three-point control. The seventh, through a shift, controls either the lean of the two rear wheels or the side shift of the rear axle.

The control levers engage sliding jaw clutches to direct the power, transmitted through the constantly operating gears to the various points of action. Turns are made quickly and easily. Power to operate the power controls is provided by the engine mounted on the grader.

NEW GEAR-MOTORS ANNOUNCED

A line of gear-motors, readily adaptable for application to machinery of various designs, has been announced by the General Electric Co. The underlying principle consists of a normal speed motor in combination with a builtin, internal helical planetary gear speed reducer. Since this type of construction permits a wide choice of speeds on the output shaft, it is possible to adapt a gear-motor to almost every type of low speed drive. Compact construction, high efficiency, full horsepower rating of the motor at the output shaft, economy of installation and operation because of the self contained unit, and simple design are some of the features of these gear-motors, which are available in either flanged or vertical mountings. The General Electric Co. also offers gear-motors with special electrical characteristics, such as high starting torque with low starting current, normal starting torque with low starting current, adjustable, varying speed, multispeed, etc.

CLASSIFIED ADVERTISING

For Sale—Equipment

FOR SALE—DERRICKS
2—122′ Seamless Steel Changeover Derricks; 2—126′ Seamless Steel Standard Derricks; 1—122′ Seamless Tubular Rotary Derrick. All are brand new Slater derricks and are now located at Tulsa and Seminole. Have placed extremely attractive prices on them for immediate disposition.
WARNER S. McCALL, Receiver for
JOS. GREENSPON'S SONS IRON & STEEL CO.
ST. LOUIS, MO.

200 AMP. General Electric Arc Welder; portable; 220 V. 3 ph. 60 cy. Complete. Like new. $350. 7x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $225. 8x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $250. 36″x18′ Fifield Screw Cutting Lathe. $650. Also large stock of lathes, shapers, pipe machines, bolt threaders, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, Ohio.

GASOLINE PLANT BARGAINS
We are dismantling gasoline plant near Allen, Okla. Bargains in various size tanks, machinery and pipe. Phone L.D. 501 or write Tulsa.
PRODUCERS PIPE AND SUPPLY CO.

FOR SALE—Dealer closing out entire line of Sullivan Company products.
Konset—$1.25 gallon, now priced 75c.
Slushmix—$42.50 Ton, now priced $25.
Gelite—$40.00 Ton, now priced $25.00.
Stock guaranteed to be first class. Write Box F-251, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—CONTRACTOR'S EQUIPMENT
Barber Greene Ditching Machine No. 47188 with capacity of 21″x5 6″—Model 44B; Case Tractor No. 68793 with crane attachment; 7-ton Fordson Road Rolling Machine, F 1535-5. Excellent lot of equipment having been used on one job only. Now located at Miami Beach, Florida, and will be offered at extremely low price for immediate disposal.
WARNER S. McCALL, Receiver for
JOS. GREENSPON'S SONS IRON & STEEL CO.
ST. LOUIS, MO.

A PRACTICALLY new Sullivan gasoline powered diamond core drill. Address Box F-262, The Oil and Gas Journal, Tulsa, Okla.

Equipment Wanted

1—HOT OIL pump, 3,600-barrel cold oil daily capacity, 1,000 lb. pressure, 700° F. hot oil, steam pressure 90 to 100 lbs. Texas Pacific Coal and Oil Company, Refining Dept., Ft. Worth, Texas.

For Sale

"CRUDE OIL" East Texas crude oil will ship to any point, Fuel oil, Gas oil. Get our prices. East Texas Fuel Oil Co., 216 Forman Bldg., Longview, Texas.

M. W. RICHARDSON
Buyer of Petroleum Products
Specializing in high gravity Mid-Continent crude oils, gasolines, naturals, kerosenes and other petroleum products.
Hunt Building Tulsa, Okla.

Business Opportunities

TWENTY YEAR natural gas franchise for sale by the City of Paintsville, Johnson County, Kentucky, on July 30th, 1932. Three gas trunk lines within mile of city. Write or wire O. W. Cain, City Attorney, for details.

OIL located before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

ESTABLISHED EARNINGS
OIL PRODUCING COMPANY paying large monthly dividends from settled production, invites limited additional capital to drill out proven leases. No proration. Exceptional investment opportunity. Fullest investigation welcomed. Responsible representatives also desired to assist financing.
STEED PRODUCTION COMPANY
Fidelity Building Dallas, Texas

WE ARE organized to serve you—"In Mexico"—Oil, Mines, Lands, Concessions, Divorces.
International Business Bureau,
First National Bank Bldg.,
El Paso, Texas.

FOR SALE—About sixty acres of land with about twelve hundred feet frontage on Maumee River, Ironville, Toledo, Ohio, suitable for an oil refinery or other manufacturing purposes. The Craig Oil Company, Columbia Building, Pittsburgh, Pa.

PARTY WITH capital wanted for Nor. Pa. Nat. Gas proposition. F. H. Wilson, Montrose, Pa.

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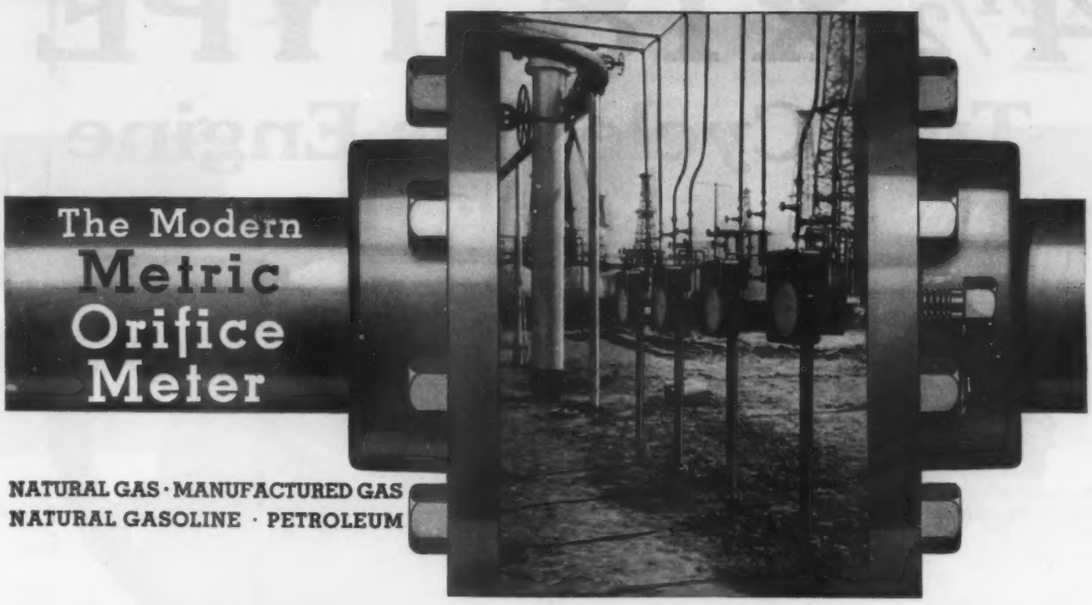

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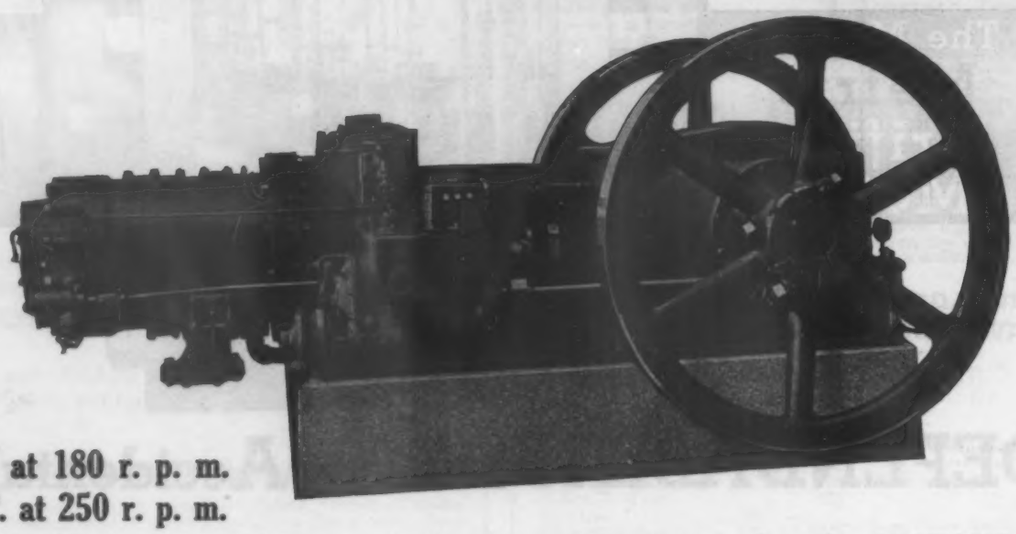
14½" x 18" TYPE C
Two Cycle Gas Engine



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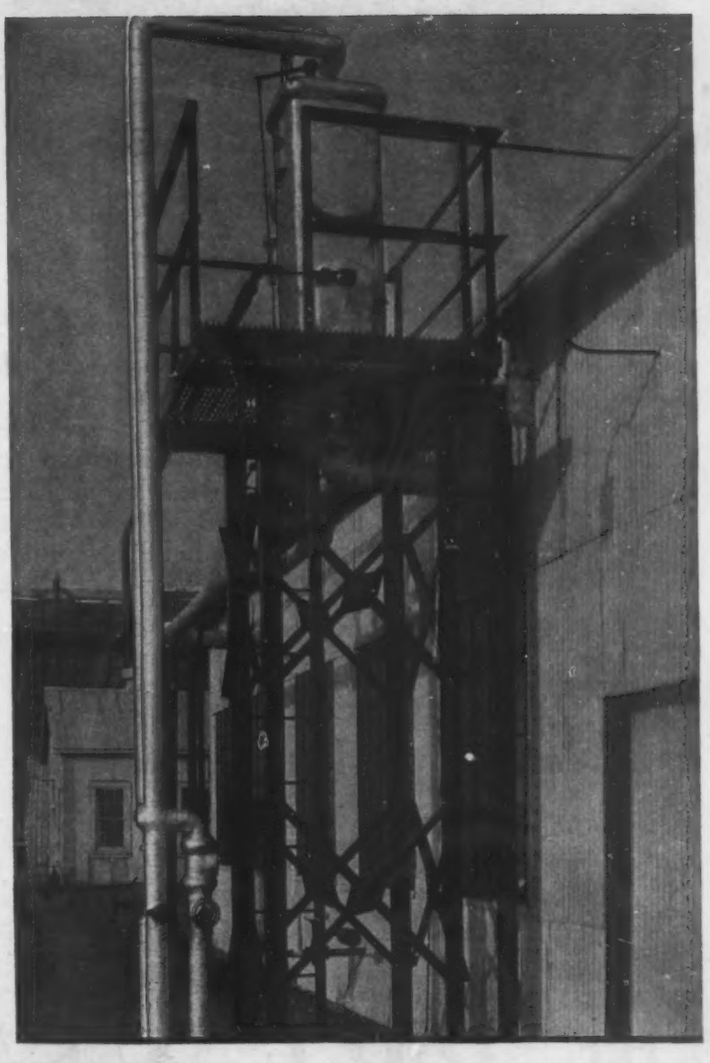

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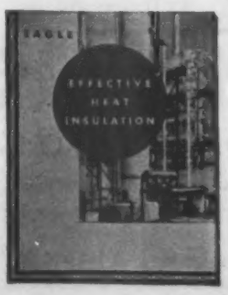

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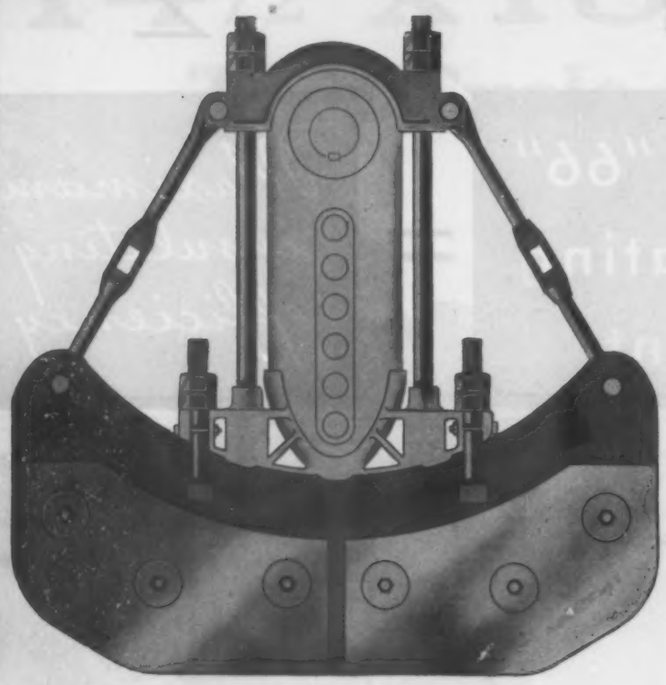

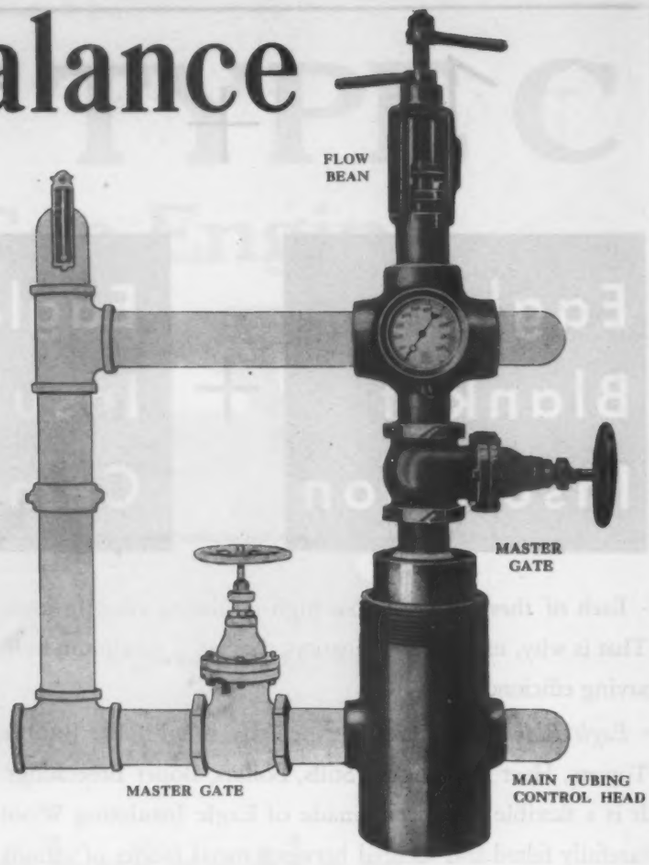

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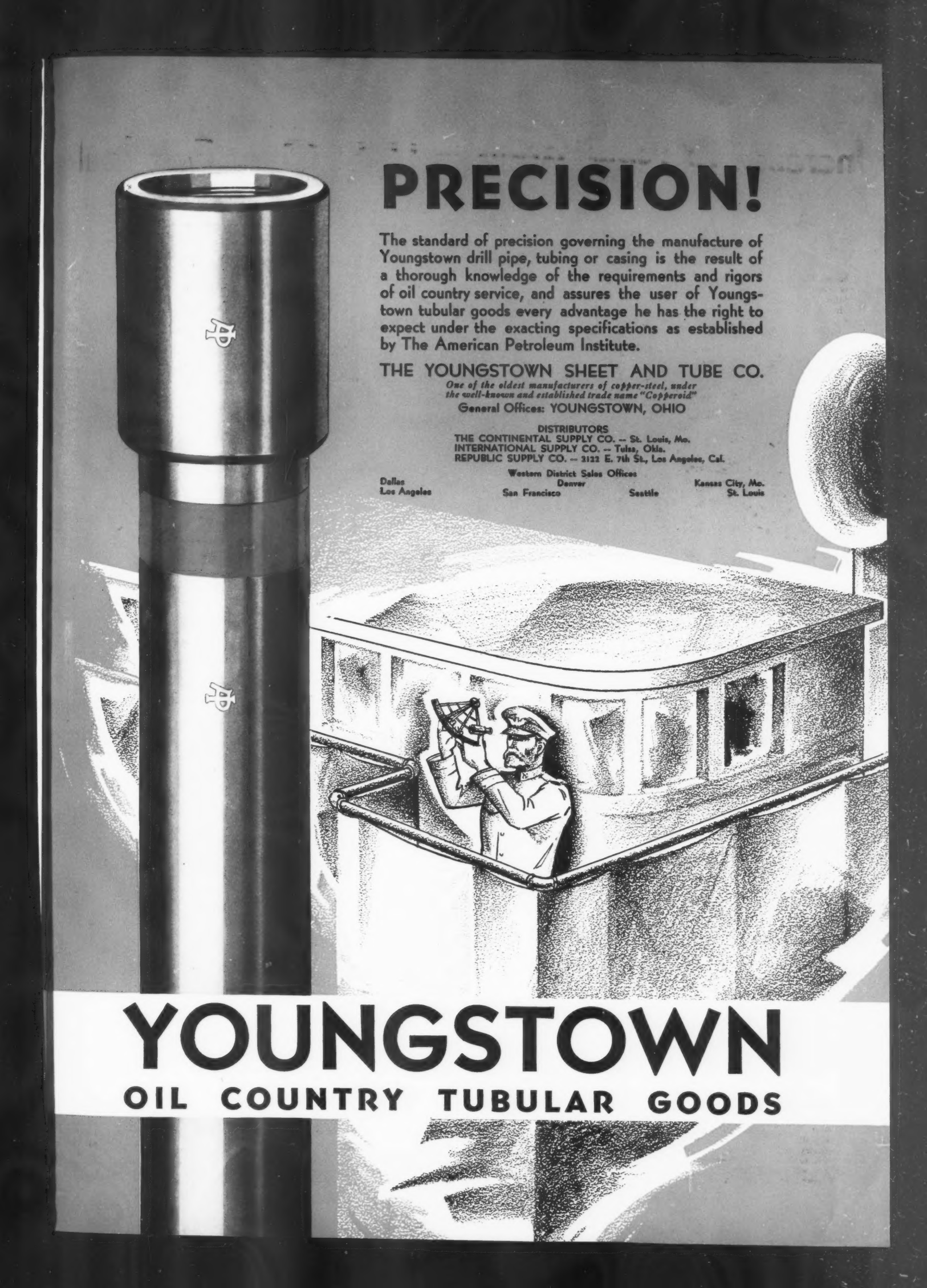
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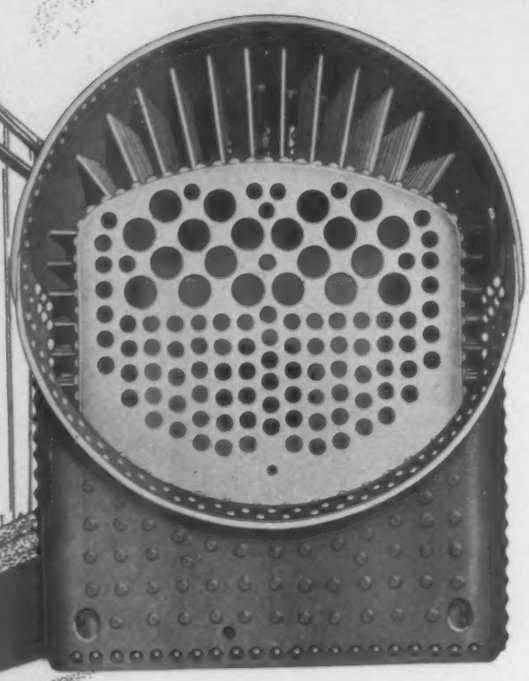

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CONTINENTAL

AIRCOWELDING
A NEW WELDING TECHNIQUE
FOR PIPE LINES

"Seeing—is Believing"

SEE how very simple AIRCOWELDING is.
SEE how fast it is compared to previous methods.
SEE how it makes unnecessary the puddling of adding metal with parent metal.
SEE how it saves adding metal by making possible smaller welds and also by permitting the use of vees of smaller included angle.
SEE how economical it is of rod and gases.
SEE how effective it is on position welds.
SEE how easily your own welders can master it.
SEE how AIRCOWELDS stand up under tensile and distortion tests.
SEE these things with your own eyes and you will readily believe the conservative statement that AIRCOWELDING doubles the output of welds per day, with from 30 to 50 per cent reduction in rod and gas consumption.

Ask for a Demonstration—No Obligation

Through our nation-wide Applied Engineering Department, we are prepared and eager to give you a complete demonstration of AIRCOWELDING without any obligation on your part whatever. CALL or WRITE to the nearest of the District Offices listed below and a demonstration will be arranged to suit your convenience. Do it today—and put your pipe welding on a new basis of speed and economy.

AIRCOWELDING Bulletin mailed on request.
Write for a copy.

AIR REDUCTION SALES CO. . . *General Offices*: Lincoln Bldg., 60 E. 42nd St., New York

A Nation-wide Welding Supply Service—Distributing Stations in all Principal Cities

DISTRICT OFFICES:

Baltimore	Portland, Ore.	Milwaukee	Dayton	Boston	New Orleans	Buffalo	Shreveport, La.	Philadelphia	Los Angeles
Cincinnati	Bettendorf, Ia.	Richmond	Minneapolis	Detroit	Seattle	Jersey City	Charlotte	St. Louis	Pittsburgh
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Represented in Texas by Magnolia Airco Gas Products Co., Houston, Beaumont, Wichita Falls, El Paso, Fort Worth and San Antonio

Take Advantage of Engineering Progress

TOMORROW is the day of the progressive oil refiners. Yesterday and today are history.

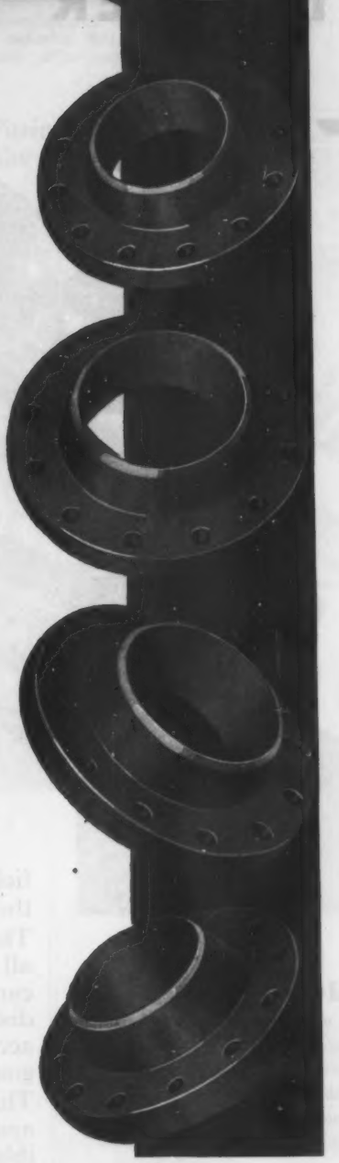
Forward looking refinery men know they must take full advantage of every development that brings increased yield and lower costs.

The Lummus Company is primarily an engineering organization with a background of 35 years of progressive engineering. This broad experience is augmented by a research laboratory of semi-commercial scale where distillation problems are thoroughly studied and processes investigated and developed. The Lummus engineering service and laboratory findings are available to progressive refinery executives.

THE LUMMUS COMPANY
50 Church Street • New York City

LUMMUS
PETROLEUM REFINING PLANTS

High Hub! for Butt Welding



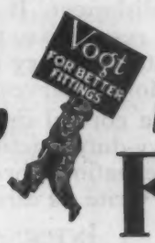
Drop Forged by Vogt . . your assurance of strength and soundness in high hub butt welding flanges. Accurately faced and drilled to A. E. S. C. standards with machine beveled hubs for easy welding. We carry a large stock of sizes, ranging from 2″ to 12″ in Series 15 and 30, for immediate shipment.

HENRY VOGT MACHINE CO.
INCORPORATED
LOUISVILLE, KENTUCKY

NEW YORK CHICAGO CLEVELAND PHILADELPHIA DALLAS

Manufacturers of Drop Forged Steel Valves, Fittings, Oil Refinery Equipment, Water Tube Boilers, Ice Making and Refrigerating Machinery, Heat Exchangers

dependable **Vogt** Forged Steel **FLANGES**



INTERNATIONAL HARVESTER
Announces a New TRACTRACTOR

THE POWERFUL 6-CYLINDER T-40

HERE comes a rugged new champion for the crawler tractor field. International Harvester—world's largest tractor builder—announces the McCormick-Deering T-40 TracTracTor.

The powerful T-40 gives you a 5-speed unit with 6-cylinder power. It is by all odds the most accessible crawler tractor on the market. Steering clutches can be inspected, adjusted, or replaced through rear cover plates without disturbing track, track frame, or driving sprocket. Other parts are equally accessible, making for surprisingly low maintenance cost. Special dust seals guard every shaft and bearing.

The T-40 has *power to spare*. It is a pleasure to handle, a revelation in work and accomplishment. It looks a fine job and lives up to its looks. Fast, flexible, highly responsive, the performance of this powerful TracTracTor is bound to interest every user and distributor of track-type power. Backed by International Harvester nation-wide service.

We extend a cordial invitation to oil field operators, pipe-line contractors, and all heavy-duty tractor operators to get full particulars on the T-40. Consult any International branch or McCormick-Deering industrial tractor distributor, or write us direct.

Brief Facts: The heavy-duty 6-cylinder engine is of valve-in-head design, with removable cylinders. High-pressure lubrication to all main, connecting-rod, wrist-pin, camshaft, and rocker-arm shaft bearings; no pipes to come loose. Thermostatically controlled cooling. Oil-type air cleaner. Oil filter. Three-point mounting.

44 ball bearings are used in the T-40 to reduce friction and avoid power loss.

The track frame, rollers, sprocket, and idler are of scientifically treated steel alloys. The track rollers have unusually large bearing surfaces. The bearings are fully protected from dirt by self-adjusting oil seals and felt washers. The roller shafts and thrust bearings are submerged in oil.

Efficient, quick steering is provided through two dual-plate steering clutches located in the rear compartment of the frame.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
606 S. Michigan Ave. (*Incorporated*) Chicago, Illinois

McCORMICK-DEERING

ALLOY PUMPS

Proportioning Steam Centrifugal

ALLOY VALVES

Globe Gate Check

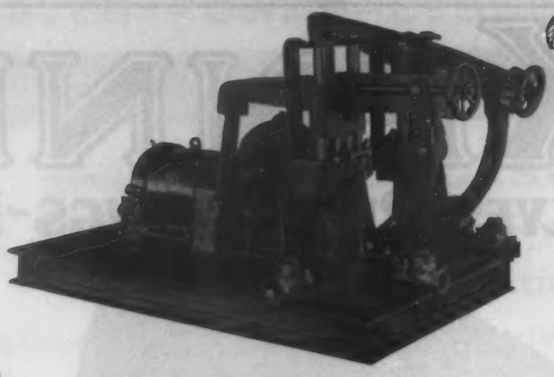
ALLOY FITTINGS

All Alloys All Sizes All Metals

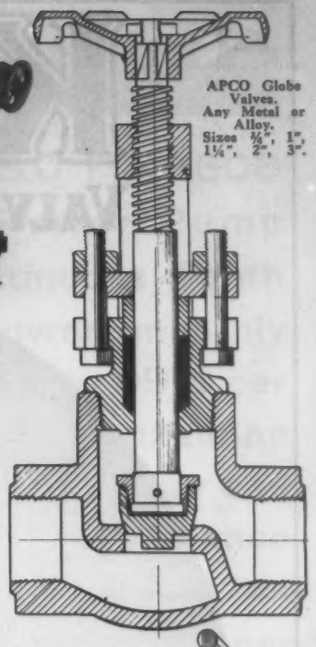
ALLOY CASTINGS

Acid Abrasion Heat

APCO CASTINGS
Special castings to customers' specifications from all of the chrome nickel iron alloys.



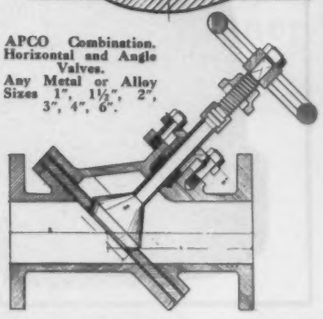
APCO Proportioning Pumps manufactured in all metals and alloys with a capacity range from 0 to 1200 G.P.H. Capacity adjustment while operating.



APCO Globe Valves. Any Metal or Alloy. Sizes ¼", 1", 1¼", 2", 3".

APCO Valves and Fittings are manufactured from the following metals and alloys:

Pure Nickel	Monel
Pure Copper	Nirosta KA4
Pure Aluminum	Meehanite
Alleghany Metal	Cast Iron
Duraloy N	Cast Steel
Nirosta KA2	Nirosta NCT3
Aluminum Bronze	



APCO Combination. Horizontal and Angle Valves. Any Metal or Alloy Sizes 1", 1½", 2", 3", 4", 6".

Write for Bulletin F C

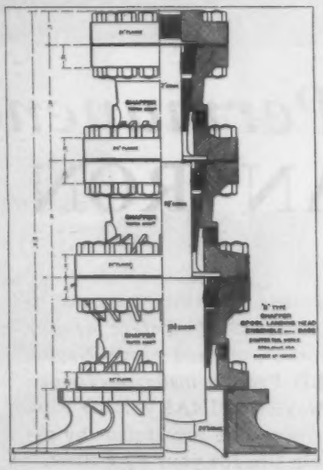
Alloy Pump & Valve Co.

5713 Euclid Avenue Cleveland, Ohio

The Head That Held The Belridge Well

At 3100 Pounds Pressure on the Casing—1950 Pounds Pressure on the Tubing

SHAFFER SPOOL TYPE CASING HEAD



HEAVY TYPE
For any pressure or length of casing encountered in drilling.

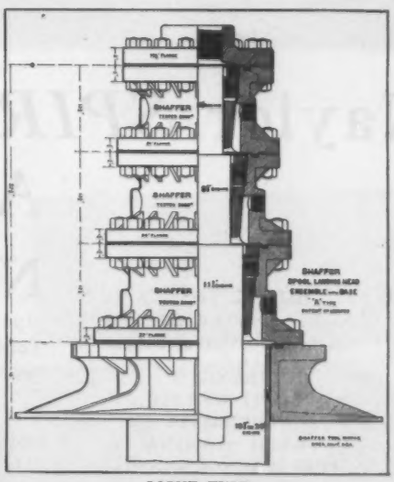
THE LAST WORD IN LANDING PIPE

By using this Head operator simply lowers casing to desired position—puts the slips in place and the casing is landed. He then cuts off the pipe flush with top of head—puts in the packing which is furnished already for use. Then he is ready to bolt on the drilling connections. Hours of time are saved by not having to cut nipples. No need of letting go casing with its accompanying disadvantages.

Some of the longest and heaviest strings of casing in the world have been landed on our Spool Type Heads.

If desired the landing base may be omitted and the head attached directly to surface string by welding or screwing.

Write for Descriptive Literature!



LIGHT TYPE
For pressures up to 3,000 pounds, 4,000 to 5,000 feet of casing.

SHAFFER TOOL WORKS

BREA CALIFORNIA

FOREIGN—Oil Well Supply Co.

MID-CONTINENT
SHAFFER TOOL WORKS, Houston, Texas
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ROCKY MOUNTAINS
GREAT NORTHERN TOOL & SUPPLY CO.
Billings, Montana

KENNEDY

VALVES-PIPE FITTINGS-FIRE HYDRANTS

Send for the Kennedy Catalog.

PROTECTION against imperfect threads, split fittings and leaky connections is assured when you use Kennedy Malleable Iron Pipe Fittings. Precision automatic machining equipment cuts the threads clean and sharp and maintains alignment of threading to 0.010-inch limits. The metal is carefully selected and tested to 45,000-lb. per sq. in. tensile strength, and the fittings are annealed for over 200 hours to assure true malleability.

You secure all these advantages at no extra cost when you standardize on Kennedy Fittings, for they are always sold at standard market prices. The big Kennedy line of over 1000 different types and sizes of malleable iron fittings covers all standard requirements and your supply house can keep you supplied if you insist on Kennedys.

THE KENNEDY VALVE MFG. CO. ELMIRA, N.Y.

New York Chicago San Francisco Philadelphia Cleveland
Atlanta El Paso Salt Lake City Los Angeles Seattle

Naylor *SPIRALWELD* Pipe *Permanency* Assured By TONCAN IRON

In addition to LONG LIFE, Naylor SPIRALWELD Pipe has these PROVED advantages:

STRENGTH
LIGHT WEIGHT
FLEXIBILITY
WELD STAMINA
PERFECT ROUNDNESS

NAYLOR SPIRALWELD Pipe gives service far outlasting that of other pipe because the metal of which it is made, Toncan Iron, has superior resistance to rust and corrosion.

The outstanding ability of Toncan Iron to resist rust and corrosion is due to the fact it is an alloy of highly refined iron, copper and molybdenum.

Consequently, since superior resistance to rust and corrosion is an inherent quality of Toncan Iron . . . . and since Naylor SPIRALWELD Pipe is made of Toncan Iron, look to Naylor SPIRALWELD Pipe to insure your pipe line investment by assuring maximum life for your pipe lines.

NAYLOR PIPE COMPANY

1230 East 92nd. Street, Chicago

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LOS ANGELES: Champion & Barber, Inc., 576 Subway Terminal Building, Exclusive Distributors: California, Nevada and Arizona

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LA CEIBA, HONDURAS: F. Hegenbarth, Apartado 18

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VANCOUVER, B. C.: Gordon & Belyea, Ltd., 101 Powell Street
MARACAIBO, VENEZUELA: Patrick H. Heeney, Apartado 298
MEXICO: C. H. Elstner, Apartado 284, Monterey, N. L.

GASO PUMP DESIGN SAVES POWER—LESSENS WEAR

GEARS

in the GASO Fig. 1508 Enclosed Power Pump are of Continuous Tooth Herringbone construction. They transmit power smoothly (to prevent needless stresses) and with 99.8 to 99.4 per cent efficiency (to save power) . . . . When you examine any detail of any GASO Pump you find correct design and fine building which minimize operating and maintenance costs . . . . Send your requirements for information on GASO Pumps to meet your needs. Gaso Pump & Burner Mfg. Company, Tulsa, Oklahoma.

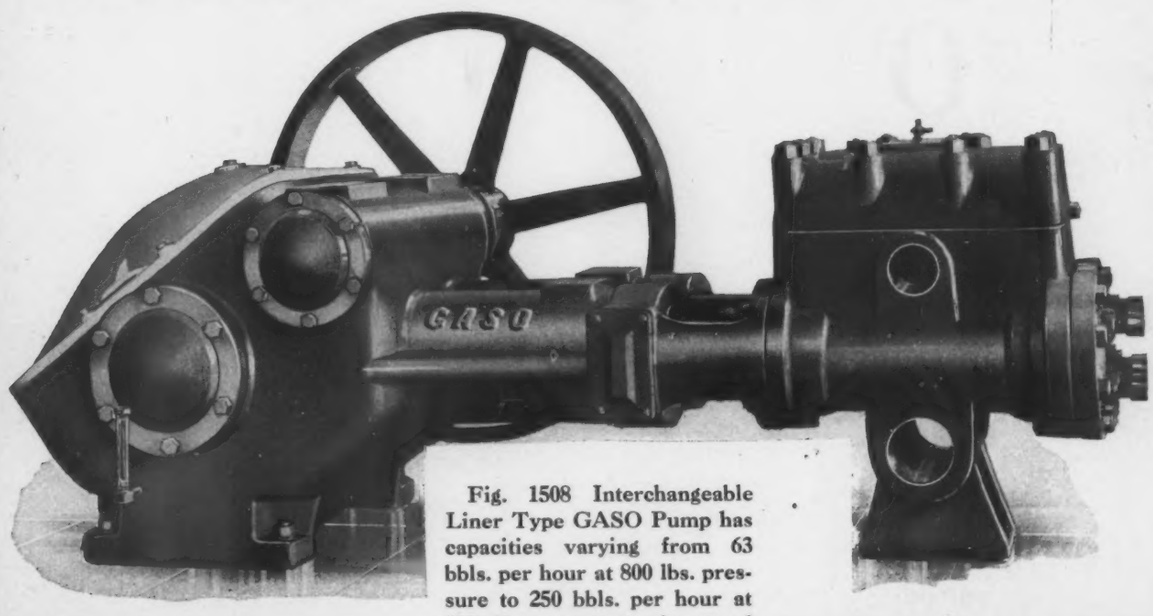


Fig. 1508 Interchangeable Liner Type GASO Pump has capacities varying from 63 bbls. per hour at 800 lbs. pressure to 250 bbls. per hour at 250 lbs. pressure. Arranged for belt or V-rope drive; direct connected to engine through flexible coupling; or for motor drive through silent chain or reduction gears.

GASO PUMPS

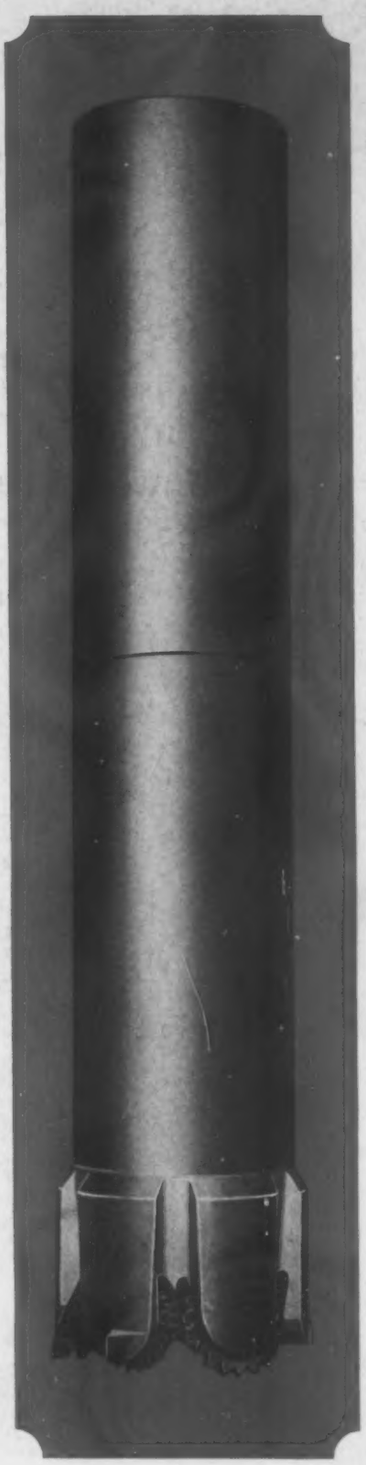
for every oil industry need

You have—

2 TOOLS IN 1

with a

HUGHES CORE BIT



Hughes cutter-heads for either hard or soft formations are instantly interchangeable—only one body being necessary for complete coring service, which is the same as "two tools in one."

Then remember this—core bits are manufactured and used because cores are desired. Hughes Core Bits produce better results in any formation—hard or soft, sticky or brittle, tough or gummy.

You can depend on Hughes Core Bits for satisfactory results.

"Sold by Supply Stores Everywhere"

HUGHES TOOL COMPANY

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